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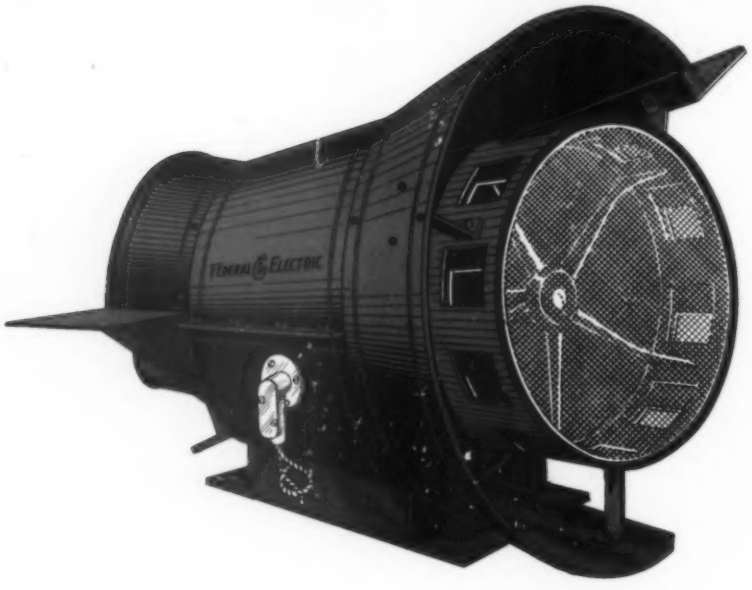

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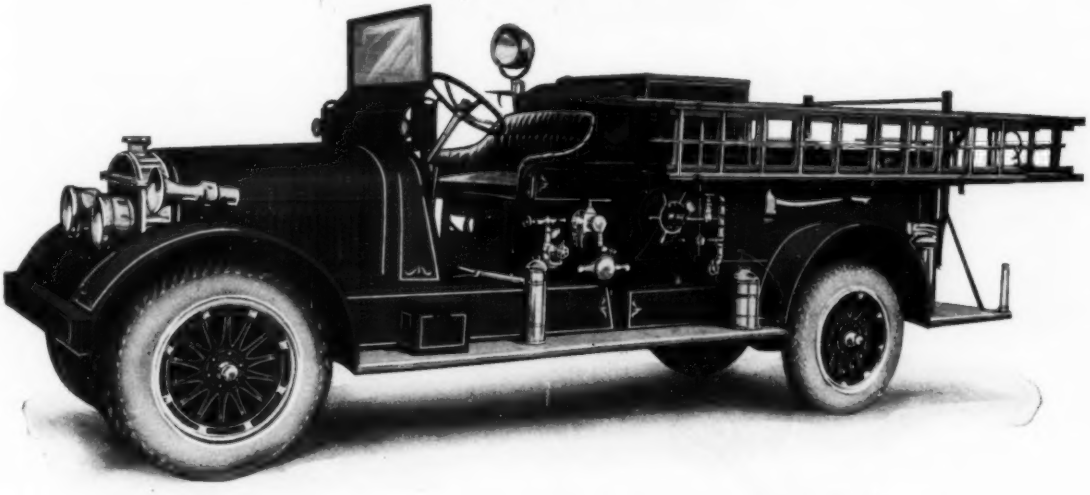

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From a Newspaper Man

THE following letter, just received, needs no further comment:

January 26, 1928.

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Your publication is of so much value that no time was lost after receiving your bill to have it renewed. Not only is FIRE ENGINEERING very interesting and educational for men in the fire-fighting and fire-protection game, but for newspaper men who "cover" fires and fire department activities. FIRE ENGINEERING keeps them from being "lost" when they have stories to write which are in any way out of the ordinary routine.

Like many of your other readers, some of whom have been studying the paper for nearly as many years as I have been alive, I swear by FIRE ENGINEERING and always recommend it to all interested in the Fire Game.

Sincerely,
(Signed) WILLIAM A. TIGHE,
Chief of Fire Protection, Boston Globe.

¶ Perhaps you feel about it just as Chief Tighe does and will be glad to pass on the good word to those who should be interested.

The Publishers

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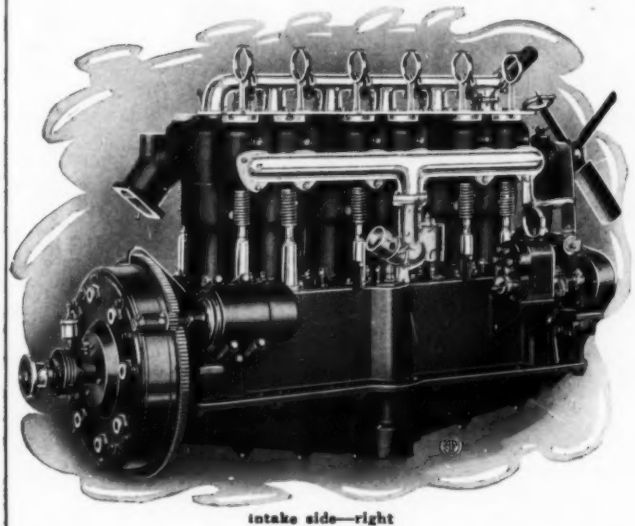
Ahrens-Fox



Intake side—right

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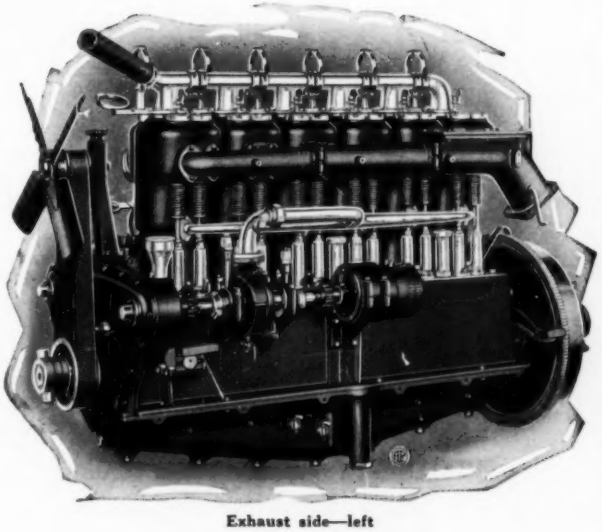

Exhaust side—left

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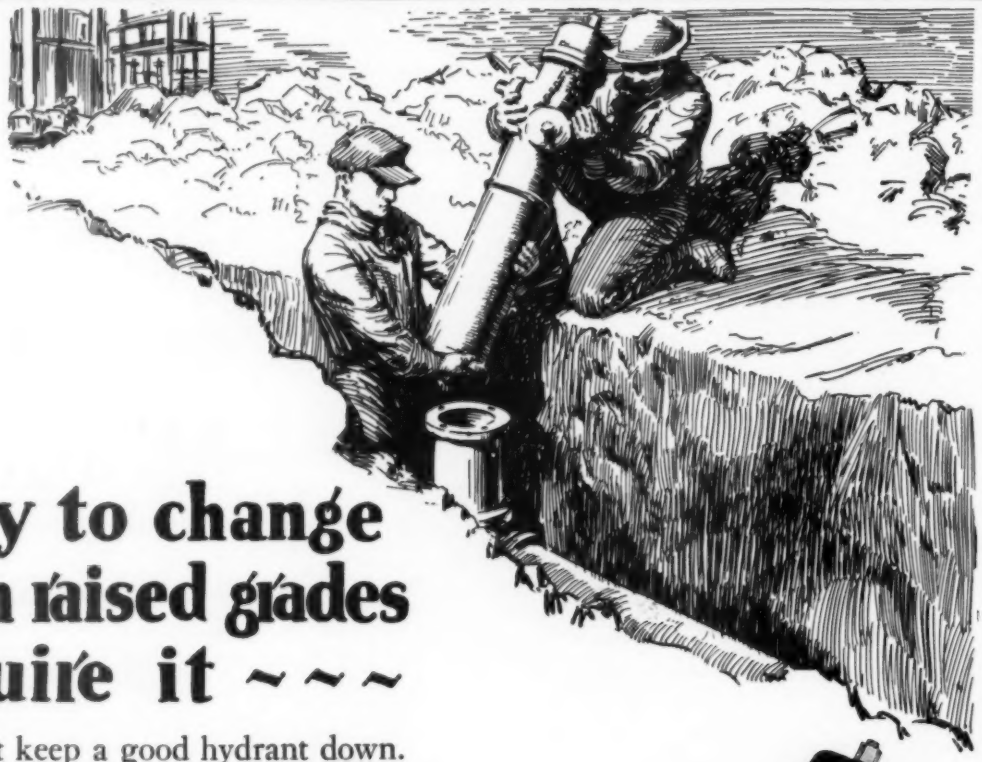

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Our catalog describes the simple construction which insures freedom from trouble. Send for it.

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Proof of STERLING Quality

"The Sterling No. 12 on the Chief's car sure clears the road when responding to alarms."

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"In regard to the installation of a double head Sterling code siren with central station transmitter and several fire alarm boxes on the property of this Company at Reading.

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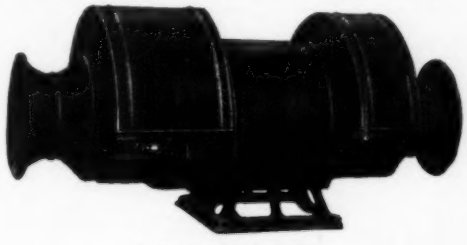

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The Sterling Code Siren—Double Head 5 H.P.

"This is to advise you that the two No. 12 Sterling Sirens obtained from you some time ago and which have since been continuously in duty on our apparatus, more than fulfilled our expectations.

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"Not only are they beautiful instruments and a credit to any piece of apparatus but they are as fully efficient in fulfilling their purpose as a fire warning signal."

JOHN J. SHEEDY,
***Superintendent,* Albany Fire Protectives.**

"In regard to sirens which were tried out by this Department last fall, would say that we had three different makes of sirens and we gave this test a vast amount of study. Sterling sirens proved to be very efficient and were absolutely positive in their operation. We are glad to have the opportunity to recommend the use of Sterling sirens to anyone at any time. I also wish to thank you for the courtesy you extended to this Department at the time of our tests."

JULIUS A. RYAN,
City Electrician,
Springfield, Mass.

"We have had some wonderful reports on the tone of this Sterling Signal and also on the distance at which the sound was heard and wish to say we and the entire community are well satisfied with our selection of the Sterling Fire Alarm."

PAUL R. GREPPS,
Chief of Reifton Fire Company,
Reiffton, Pa.

"I want to take this opportunity to acknowledge the receipt of the Sterling Motorcycle Siren you sent me. I have tried it out and was greatly impressed at the remarkable improvement over the old type. If this Siren continues to give the results it has up to this time, it will certainly be the best ever."

FRANK X. FITZGERALD,
Bureau of Motor Vehicles,
New York Tax Department.

"I want to say that every officer of the Company has nothing but the highest praise for Sterling. Never have I personally transacted business with a more courteous and finer set of people. You have our very best wishes and it will be our pleasure to speak a good word for your organization on any occasion which presents itself."

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Waukesha six-cylinder pumper engines are built in two sizes: 500-gallon and 750-gallon capacity. They are designed to give unfailing service and meet all Underwriter's Test Requirements. They have the largest crankshafts used in any engines made for pumper service, they are equipped with genuine "Ricardo Heads" that assure high power and long life, and have exceptionally rigid crankcases, designed to increase bearing life. Full description of these engines will be found in Bulletins 592 and 628. Write for them.

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Waukesha 956 St. Paul Ave. **Wisconsin**

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Never Sleeping Protection Against Winter Fire Hazards

During the winter season especially, an adequate fire protection system is an absolute necessity. At this time of the year the fire hazard is increased and hovers on all sides ever ready to strike, and thus bring loss and damage to unprotected property.

Thousands of buildings of all types and sizes the country over are adequately protected by ADT Property Protection Services from the ever-present fire menace. Whether it is ADT Manual Fire Alarm service, ADT Automatic Fire Alarm service, or ADT Automatic Sprinkler Supervisory service,—all provide never-sleeping protection that safeguards day and night. Protection which is ready at all times to check an incipient fire, and prevent loss.

Fire Engineers and Executives who have inquired and investigated know that ADT Protection Services are preferred because the systems are given proper maintenance and are under constant supervision. Their record for efficiency since 1873 has earned the confidence and respect of insurance underwriting organizations, as well as that of thousands of subscribers.

Write for New Bulletin No. 902 on "Night Watchman Supervision and Fire Alarm Systems."

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183 Varick Street, New York, N. Y.

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A true account of how, in the year 1866, his Lordship, the Earl of Essex, with the aid of a small hand pump, quenched, at great peril to life and limb, a dangerous blaze and preserved from the flames the manor house at Watford.

"Last night"—his Lordship wrote to the Times—"I was startled by that most fearful of all cries, 'Fire, fire!' I soon learned that a fire was raging in a large, two-windowed, unoccupied bedroom. How caused is to us all a great mystery. It is my custom to keep one of the small engines on each floor. In two minutes I was in the room with one of them. It was like a furnace. The curtains, shutters, casements, and cornices of both windows were burning and crackling from floor to ceiling. I was quite alone at the moment, yet before assistance arrived I had completely subdued the fire of one window without exhausting the engine, and when assistance and more water did arrive we very soon extinguished the other. So fierce was the fire that the lead of the casements was melted, and the casements themselves were burnt off their hinges. I will only add that, by God's mercy, the house was saved by this small engine. Had it not been at hand and in order, most assuredly Cassiobury would be now a heap of ruins."

Village of Mountain Iron
MOUNTAIN IRON, MINNESOTA

September 30th, 1927

Northern Fire Apparatus Co.
Minneapolis, Minnesota

Gentlemen:

We are sending you a photograph of our motor driven Fire Truck, equipped with a Northern Rotary Fire Pump which was installed on this Fire Truck in 1917.

The Northern Rotary Fire Pump is in good condition at the present time and I think it will stand another ten years of pumping.

Respectfully yours,
Harvey Ferris
Fire Chief.

This Northern - equipped truck is entering its eleventh year in the service of Mountain Iron, Minnesota. Though the pump lacks numerous refinements incorporated in later models, their letter speaks eloquently of the strength and dependability of this, one of our earliest designs.

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FIRE ENGINEERING

(A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER)

The Journal of the Fire Protection Profession

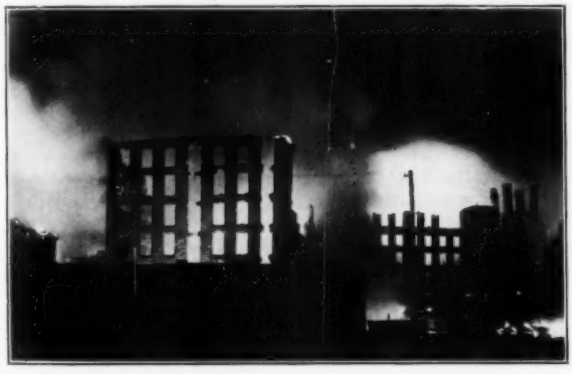
VOLUME LXXXI FEBRUARY 22, 1928 NUMBER 4

Fall River Has Another Big Fire

Six Million Dollar Fire Wipes Out a Big Slice of Business Section— No Residences Destroyed—Many Outside Departments Assist

By HARRY BELKNAP, Boston, Mass.

ON the night of February 2, fire starting from an undetermined cause in one of the old stone buildings of the Pocasset Mills, Fall River, Mass., spread throughout the mill property, which had not been used for several years and was in process of demolition; and fanned by a brisk westerly wind the flames leaped



The Glowing Ruins of the Four Pocasset Mills Buildings, where the Fall River Blaze Originated

to nearby structures, assuming the proportions of a conflagration.

Before the fire could be brought under control by the combined efforts of the Fall River Department and men and apparatus from municipalities within a 60 mile radius, damage conservatively estimated at $6,000,000 had been caused. Business blocks, two large hotels, theatres, banks, office buildings, and other structures in the heart of the city were wiped out, tottering walls and smoking ruins alone remaining. Bitterly cold weather prevailed, men, pumping engines, and ladders being coated with ice as the spray from hose lines froze as it fell.

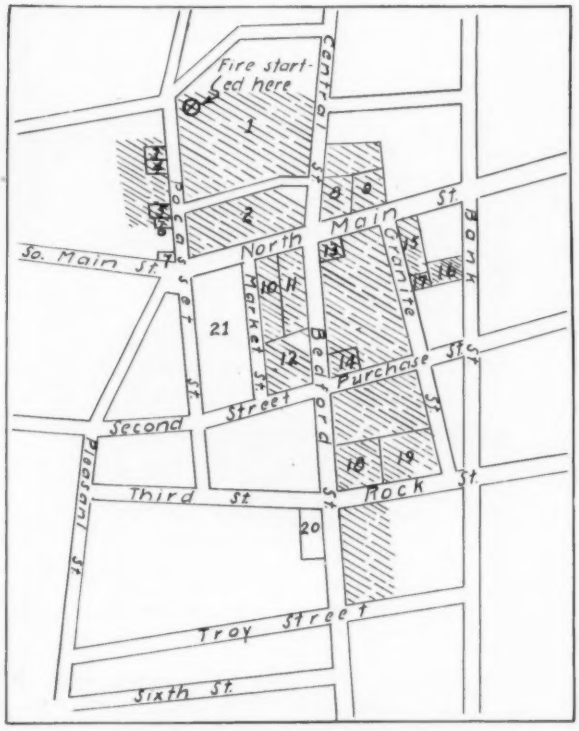
Origin Bonfires by Workmen Within Structure

The workmen engaged in tearing down the mill are said to have made bonfires inside the structure to keep warm and it is thought that possibly smouldering embers from these bonfires may have started the blaze that had such destructive effect. Most of the machinery had been removed from the mill buildings and the automatic sprinkler system was disconnected and useless.

The first alarm was sounded from Box 1252, corner of Pocasset and South Main Streets, at 6:27 p. m. by a patrolman, acting on the report of a citizen who had seen a blaze in the southwest corner of the Pocasset Mill. The second alarm was sounded at 6:34. Dense smoke hampered the firemen in locating the heart of the fire.

Rapid Spread of the Fire

The flames spread throughout the three mill buildings and were whipped into fury by the stiff wind. The wall of the No. 1 mill fell upon the Interstate Bus Terminal and from here the fire jumped to the rear of the Granite



Map Showing Trail of Fall River Fire

Key to damaged portion of city (shaded part of map): 1—Pocasset Mill; 2—Granite Block; 3—Miller Block; 4—New Herald-News Building; 5—O'Hearn Building; 6—Old Herald-News Building; 7—Kresge Store; 8—Mohican Hotel; 9—Rialto Theatre; 10—Union Savings Bank; 11—Citizens' Savings Bank; 12—Massasoit-Pocasset National Bank; 13—Eagle and Famous Restaurants, Burke & Davis Company Store, Fruit Store, Office of Atwater Coal Company; 14—Buffington Building; 15—Wilbur Hotel; 16—Temple Bethel; 17—Old Police Station; 18—Metamocet National Bank; 19—Premier Theatre; 20—Small Wooden Buildings Adjoining the Troy Mill; 21—City Hall (undamaged).

A Striking Night View of the Big Fire at Fall River, Mass., Giving an Idea of Its Extent by the Glare in the Sky from the Burning District

Block, an old time store and office structure built in 1843 and covering a large area on Main Street.

Meanwhile the fire had spread across Pocasset Street to the buildings of the *Evening Herald, L'Independant,* the French language newspaper, and the Nathan Miller Building. Lines were taken to the roofs of the Kresge and other buildings on South Main Street and the march of the flames in this direction was checked. Sprinklers in the new *Herald-News* Building aided.

The wind carried the flames across Central Street to the Mohican Hotel and bowling alleys in the rear. Chief Sullivan had already sounded a general alarm and summoned aid from nearby cities. All the guests and employes of the hotel had been warned and quickly vacated the building. The hotel was a brick structure, five stories high, containing 400 rooms. Adjoining this to the north was the Rialto Theatre, a movie house from which the audience was dismissed quietly by the manager and a policeman. The theatre fell prey to the flames, but a tall brick firewall stopped the advance of the fire beyond this point on the west side of North Main Street.

Help Arrives from Other Cities

The fire had crossed Main Street by this time and a half dozen office buildings and banks and the Wilbur Hotel were ablaze. By desperate efforts the firemen saved the City Hall and Federal Buildings, but the fire swept eastward for three blocks on Bedford Street; apparatus from other cities swung into action and the throbbing of powerful motor pumps resounded from all directions as more and more hose lines were brought into action.

The building of the *Fall River Globe* was saved by a water curtain from the roof and by streams played out the windows from standpipe lines. Temple Beth-El on Bank Street was destroyed and the telephone operators were forced to vacate the telephone exchange which adjoined it. The offices of the Postal and Western Union Telegraph Companies had already been burned out and the city was cut off from outside communication except radio.

From this time on the Gamewell Fire Alarm system was depended upon for transmission of all messages. The new fire alarm building built a few years ago and the underground wiring proved invaluable as all overhead wires in the fire zone were a mass of ice. Over the Gamewell wires to fire headquarters came alarms for a number of fires in widely separated parts of the city and apparatus was dispatched to the scene of these blazes several of which had been caused by flying embers from the main fire.

Three Fall River firemen were injured when the south wall of Pocasset Mill No. 2 collapsed. Many other firemen suffered minor injuries. The first call for militia was sounded at 12:10 a. m. and the second call at 1:25. On request of Chief of Police Martin Feeney a large detachment of State police was sent to the scene by Col. Alfred Foote, State Commissioner of Public Safety. Colonel Harry F. Skinner was in command of four companies of militia and naval reserves and coast guards also aided in patrolling the fire zone in which martial law was declared. The troops were from the Third Battalion of the 241st Regiment. A hundred bluejackets were sent to the scene from the Newport Naval Training Station.

Outside Chiefs and Departments Which Cooperated

Chief Frank E. Charlesworth, of Providence, R. I., went to the scene with four motor pumping engines and an aerial hook and ladder truck. Pawtucket and Central Falls sent aid.

Woonsocket, R. I., sent a motor pumper; Chief Harry W. Tufts, Engineer Lester Keyes, and eight men came with a pumper from North Attleboro. From Attleboro came Chief Fred Clark with another pumper and eight men.

Somerset, New Bedford, and Brockton rushed men and apparatus to the scene. Chief C. W. Maxim, of Middleboro, collected a force of call men of the Middleboro department and went to Fall River with a new Maxim pumper from the Maxim factory in Middleboro.

More reinforcements came from Taunton, Mass., and Newport, R. I. Boston received the call for aid and

(*Continued on page* 158)

Never a Fire on U. S. Navy Ships!

Although There Have Been Fires on Naval Shore Stations, Ships Have Had Clean Fire Records Past Ten Years—Fire Prevention Method Used

By G. K. SPENCER

THE United States Navy is the only nautical organization in the United States which has not had a fire aboard its ships in ten years. The Navy is perhaps the most efficiently policed organization against fire. There have been accidental fires in the Naval shore works, but not in the forces afloat, so careful are the officers and men to avoid that old plague of the sea. There was a time when fire in a ship at sea meant the possible loss of all hands. Today, the first wisp of flame is intercepted and extinguished.

All Navy Craft Have Some Type of Fire Protection

Naval fire drills are still held, but they comprise only the proper application of the chemical equipment. There is scarcely a dozen feet unprotected in any part of a ship by chemical fire extinguishing apparatus. This protection extends into all naval property afloat, small gasoline boats and aircraft. A naval regulation requires that every individual cockpit of an aircraft shall be supplied with one or two chemical fire extinguishers, while within the motor hood and in close proximity to the motor is a specially patented box which contains special chemicals that may be thrown over the motor at a touch of a button in the pilot's cockpit.

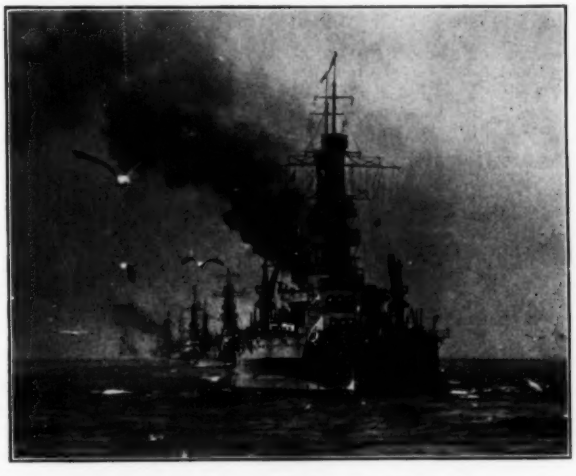
One reason for the efficiency of the naval fire-prevention system (it is fire-prevention in the navy rather than fire-fighting) is that the department is organized for war, and the ships are protected as though they were to face the shell impacts and explosions of an enemy. Naturally, a system arranged to defend against such activity has little difficulty with fire-prevention in peace days.

Naval personnel are trained to prevent fire. Undoubtedly, there have been numerous occasions where fire might have developed, had it not been for prompt action at the start. One seaman, a man named Hahnke, formerly of the German Navy, was highly commended by the Admiral of the Fleet in 1924 for his action in saving a navy barge, the gasoline in whose motor had become ignited. Hahnke leaped into the motor compartment with a foam extinguisher and at the risk of his life extinguished the gasoline before it could spread to the woodwork of the boat. The action was automatic. A wisp of smoke and a leap from Hanhke with his extinguisher.

In each battleship, there is carried aboard an average of four hundred chemical extinguishers, located everywhere. A complicated system of thermometers and chemical reactive agents, allied with an electrical system, inform the officer of the day if the heat in any particular compartment below decks is higher than it should be. When a certain mark is reached on the bridge thermometer, a man is sent below to inspect the threatened compartment. This system was originally designed for use in the ship's magazines, where all explosives for guns and small arms are stowed away.

I have seen the captain of a battleship calmly order the flooding of the magazines of his ship, containing tons of powder. His order was given because the bridge signals indicated that the heat within the magazines had attained a dangerous intensity. There would be many explosions in ships' magazines were it not for this care. Even spontaneous combustion would account for a share of the explosions, but they are never permitted to occur.

The Government does not suffer great loss by the flooding of magazines. When powder is soaked with sea-water these days, it is only necessary to let it dry in the sun to restore it to usefulness again. The powder is specially made, and can be wet and re-wet many times, and dried often, without losing its potency.



During the Past Ten Years, There has Never Been a Fire Aboard a U. S. Navy Boat

All parts of the modern battleship have chemical fire protection. The turrets are especially well served, for fire in a turret might spark down into the handling and powder rooms, and cause the loss of the entire turret crew. Even in the fighting tops, there are the familiar hand-extinguishers. Flames here might be started by the impact of enemy shells on parts of the rigging leading to the tops. After such a shell explosion a signalman or seaman might lay aside his flags or machine gun long enough to play an extinguisher on the flame.

A very important naval improvement against fire was the comparatively recent change from rigid conduit for electrical wires to the armored cable method. Most of the merchant marine lines have since come out in favor of this method.

It has been definitely found that flexible armored conduit, which can move with various strains set up in the ship, will not cause wearing in the wire insulation, and will not open as rigid conduit does on ship board. This idea is useful even in shore construction. One can never know when a strain on a building will cause sagging and yawing of the conduit. No naval ship today is permitted to have rigid conduit.

Another contribution of the navy to the science of fire-prevention is the development of a fire-proof linoleum for floor coverings. Attempts to ignite the newly developed linoleum by chemical or flame have been unsuccessful. The navy developed this product because

Aeroplanes are Protected by Portable Extinguishers

shell explosions sometimes ignite ordinary linoleum and cause disastrous fires in the passage-ways. Such fires occurred in British ships during the Battle of Jutland.

HOW TO STRETCH LINES TO THIRTIETH FLOOR OF BUILDING

Discussion of Question Asked in New York City Promotional Examination to Captain—Problem Based on Recent Sherry-Netherland Hotel Fire

By WM. JEROME DALY

IN the recent examination for promotion to the rank of captain in the New York Fire Department, one of the questions asked was:

> How would you get water to the thirtieth floor of a building in which both standpipe and elevator are out of commission?
>
> Explain definitely what men you would need, what orders you would give them and how the necessary pressure could be obtained.

The question was obviously based on the fire atop the forty-second story Sherry-Netherlands Hotel, while in course of construction last April. There the standpipe was found to be incomplete and therefor unfit for use; elevators were inoperative because the electric switch fuse had been secreted for the night to prevent the night workers from using the lift.

The question in the examination is still the talk of the department. There are various opinions as to how such a question should have been answered. It was with the object of obtaining a consensus of opinion that the writer sought the views of some of the senior chief officers who were known to have anticipated just such a problem.

Deputy Chief of Department James W. Heffernan in charge of the 1st Division whose district embraces lower Manhattan Island from Canal Street to the Battery in which are the bulk of the skyscraper buildings, believes that an emergency standpipe of three-inch hose should be built downward from every sixth floor of such a building.

Deputy Chief Henry B. Helm, in charge of the 2nd Division whose district extends from Canal Street to 14th Street and has but a few skyscrapers in it, believes that the emergency standpipe of 2½-inch hose should be built downward from one central point only, immediately below the fire.

There may be other plans by other members of the department. So far as it can be ascertained the department, as yet, has no standard for combating such a fire. In any event, the question has precipitated a department-wide discussion and the following are reported without disparagement to other schemes undisclosed to date.

Method Suggested by Chief Heffernan

Chief Heffernan's plan is:

Order the first company to stretch two 3-inch lines to the front of the building if the windows are to be used, or into the corridor if the elevator shaft is to be used. Siamese these two 3-inch lines into one 3-inch line. If in the high pressure district, place a high pressure gauge with a manually operated relief valve on the single 3-inch line at the siamese point to relieve the line when necessary.

Send Company No. 2 to the sixth floor of the building with two lengths of 3-inch hose, each length doubled on itself three times, so as to restrict the size of the bundle to a length not greater than 6 feet. Tie each end of the folded length of hose with ladder straps. Assign two men to each length package, another man with an axe to break in, also take a 6-foot hook, a hose roller and roof rope.

This practice is repeated with similar equipment by each other company at the 12th, 18th, 24th and 29th floors for a fire on the 30th floor, using hook and ladder companies as well as engine companies. But, in the case of the company sent to the 29th floor, it shall carry up in addition three lengths of 2½-inch hose, a reducer from 3-inch to 2½-inch and a 1⅛-inch shut-off nozzle for the handline. It shall have been determined in advance which line of windows in the building is to be used for building the emergency standpipe.

From each of the floors so designated, pay out the connected two lengths of hose line over the roof roller, but tie the roof rope to the hose at least 10′ from the male butt, checking the drop of the hose by anchoring the roof rope around some pillar or other stationary object. This is to be done just as soon as the tieing point of the roof rope to the hose line passes over the sill, thus leaving about ten feet of the male end of the hose line in on the floor.

Reach out with the 6-foot hook and "fish" in the female end of the hose line which has been lowered from the next 6th floor above. Connect up. Now you have a solid line of hose from the 29th floor to the sidewalk siamese, looped in and strapped on every sixth floor. From the 29th floor, or the 28th floor if the fire is hot enough to keep you two floors below it, stretch up the stairway with the 2½-inch line to meet the fire.

Such a line from a modern fire engine, pumping at a pressure of 250 pounds, should supply forty pounds pressure at the nozzle with 237 gallons flow.

Plan Outlined by Chief Helm

Deputy Chief Helm's plan of action is as follows:

First ascertain if there is a stairwell or an elevator shaft through which the hose line can be lowered. If one or the other are not available, use the outside of the building. If there are set backs in the building, use two men on the roof of each set back to guide or veer the hose line off and down when it reaches you from above. Estimate the height of the fire and figure on one length of hose for each 25 feet of height in order to get two standpipe lines. Put two men on each rolled-up length of 2½-inch hose and start them to an agreed point just below the fire, or possibly to an adjoining roof, each man to alternate per floor in carrying the hose to the designated place. In addition to the hose for the make-shift standpipe, add four lengths of 2½-inch hose for operating as hand lines from the assembly point in the building.

Also send up one roof rope for every two lengths of hose, two hose rollers, a hook, an axe and two 1⅛-inch nozzles. Stretch two 3-inch lines with reducers, from the two nearest engines to meet the two 2½-inch lines when they come down.

Connect the 2½-inch hose lengths into two separate lines at the assembly point up in the building and lower them. As the hose lines are being spent over the sills on the roof rollers, tie the roof ropes end to end, making a loop or a bight of ten feet at every one hundred feet in the rope. This is to fasten the ropes to the hose line at every one hundred feet, allowing

(*Continued on page* 160)

Where Hydrant Lines Would Have Helped

Pumping Station Must Be Protected at Any Cost— Handling the Fire and Using Direct Hydrant Streams

IN operating at the fire described in the last article of the series on Administration, the local fire department did not utilize hydrant streams, although a pressure of 75 pounds was available at the hydrants up until the time the pumping station was put out of commission. This was probably the most serious error encountered, and had proper use been made of hydrant facilities it is possible the fire would have been confined to a much smaller area.

The city in which this fire occurred has a population of about 12,000 and is located in the central west. The fire department consists of five companies, three engine companies and two truck companies. One of the engine companies and one of the truck companies are volunteer organizations while the rest are paid companies, but poorly manned.

Fire Department

Engine Co. No. 1, a paid company, had four men on duty at the time of the fire. This company was equipped with a 700-gallon triple combination machine with 1000 feet of hose; Engine Co. No. 2, also a paid company, likewise had a force of four men, and was equipped with a 500-gallon triple combination machine with 600 feet of hose; Engine Co. No. 3, a volunteer company, had a membership of 25 and possessed a 750-gallon triple combination carrying 1200 feet of hose

Truck Co. No. 1, a paid company, with three men, was equipped with a city service truck while Truck Co. No. 2 was a volunteer company with a membership of 38 and possessed a city service truck.

Response to alarms at the fire described in this article was as follows: First alarm, Engine Cos. Nos. 1 and 3 and Truck Co. No. 1.

General alarm Engine Co. No. 2 and Truck Co. No. 2.

Water Supply

The water supply of the city was furnished by a direct pumping system, the pumping station being located directly across a 50 foot street from the coal pocket which burned. On the far side of the city was a 500,000 tank supplied from the city main and used to equalize the pressure and distribution of water during periods of heavy draught. When the pumps were in operation the pressure in the mains in the neighborhood of the fire stood at approximately 75 pounds. When the pumping station was out of commission and a heavy flow was required from the mains in the neighborhood of the fire, the pressure dropped to less than 30 pounds.

Description of Property Involved

The diagram herewith gives the general layout of the property involved, including the buildings surrounding this fire.

The coal pocket in which the fire started is located in the center of the block on Smith Street between 9th and 10th Avenues. It was of heavy timber construction, about 72 feet in height and was well filled with soft coal at the time of the fire. Directly behind the coal pocket was a bank of five fuel oil tanks mounted 12 feet above ground and each containing between 12,000 and 25,000 gallons of fuel oil.

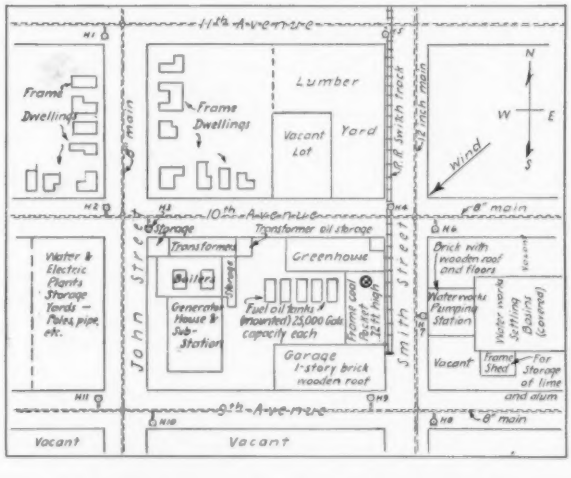
Directly across the street from the coal pocket was the water works pumping station, as shown in the diagram.

The Fire

The fire was discovered burning in the coal pocket by the night engineer at the water works pumping station about 5 a. m. on an October morning. He reported having smelled smoke for several hours prior to discovering the blaze which would indicate that the fire had had considerable start before detected.

The engineer promptly called up the fire department and the first alarm assignment responded. This assignment included Engine Cos. 1 and 2 and Truck Co. No. 1.

Immediately upon the arrival of the first engine company, two members were sent up into the coal pocket and discovered fire burning up beneath the roof above the coal. They retreated and a line was sent by ladders about half way up the coal pocket and then taken inside



to a stairway but could make no further headway on account of the intense smoke and heat. This line was laid in by Engine Co. No. 1 stationed at hydrant 6. The line was equipped with 1¼ inch nozzle. It operated for a while in an endeavor to cool off the atmosphere and make it possible for the men to proceed.

A second line was laid from Engine Co. No. 3, stationed at hydrant No. 4, to the rear of the coal pocket but no entrance to the pocket could be made at this point. The line was sent up by ladder and endeavored to wet down the roof of the coal pocket but with little effect.

Shortly after the second line was put into operation fire burst through the roof and it was then apparent that the coal pocket was doomed, on account of the progress the fire had made and the inflammable construction of the pocket. The chief, arriving about this time, sent in a call for the remaining two companies, Engine Co. No. 2 and Truck Co. No. 2.

Engine Co. No. 3 remained at the rear of the coal pocket and continued to wet down as best it could while

the line from Engine Co. No. 1 operated from the front of the building after withdrawing from the ladder.

Upon the arrival of Engine Co. No. 2, it was placed at hydrant No. 9 and a single line laid to the top of the one story garage. This line operated on the coal pocket and wet down the outside.

Coal Pocket Collapses

After operating for a few minutes with this arrangement of lines, the chief noted the Smith Street wall of the coal pocket bulging and ordered the men to withdraw to a point across the street. They had hardly done so when the front wall gave way and the burning coal was precipitated across Smith Street burying the line from Engine Co. No. 1. Water was shut off from this line, the line was broken, and two additional lengths put on and the company continued to operate from the Smith Street side to wet down the burning coal.

So much for the early stages of the fire.

It is evident that the coal pocket was doomed and that little could be done from the street to hold the fire from destroying this structure.

But after the coal pocket collapsed the situation was much better from the standpoint of holding the fire than prior to the collapse of the coal pocket. Although a lot of coal was thrown across Smith Street, there is no reason why the water works pumping station should have been involved.

Suggested Method

The following is the suggested method of operating at this fire, reassigning engine companies as follows:

Engine Co. No. 1 at hydrant No. 6 and two lines stretched to 1½ inch pipe with pipe holder, to operate on Smith Street in front of the coal pocket.

Engine Co. No. 3 at hydrant No. 3 and a single line stretched to the rear of the coal pocket, using a 1¼ inch nozzle.

Engine Co. No. 2 at hydrant No. 2, and two lines stretched to the roof of the garage each using a 1¼ inch nozzle.

Upon the collapse of the coal pocket, two hydrant lines should be stretched from hydrant No. 6 to wet down the coal and protect the water works pumping station. These lines may operate from within the pumping station if necessary.

Two lines also to be stretched from hydrant No. 8

(*Continued on page* 164)

Japanese Firemen Conduct Modern Fire Exhibitions

Japanese firemen in far off Tokio use modern methods during their fire department drills. The exhibitions in ladder work are patterned after the evolutions of large American cities. The mass of vehicles in the foreground is proof that the day of the horse is also doomed in the Japanese cities.

Chief Saunders of Lowell Removed

Chief Edward F. Saunders of Lowell, Mass., has been removed as head of the fire department as the result in the split of the local political party. It is another case of politics entering the fire department operations.

Five of the council voted to retain Chief Saunders and nine voted to give the position to Chief James C. Sullivan, present district chief.

Chief Saunders has been a member of the Lowell, Mass., department for thirty-nine years.

A petition was filed in behalf of the deposed chief asking for a pension. The matter was referred to the city solicitor for his opinion. In the petition, it was stated that Chief Saunders was a member of the department since 1888.

Ex-Chief Edward F. Saunders, Lowell, Mass.

More Firemen for Bayonne

Forty new firemen will be added to the Bayonne, N. J., fire department after having received a full training course.

Formerly it was the practice to place the new men in the service and these rookies were expected to absorb the necessary information from contact with the seasoned firemen. This time, because of the large number of new firemen, the men were given a fire training course. Speakers from the New York city fire department were called from time to time to train the recruits. Chief McLoughlin stated that the new system of training rookies will be continued in the future.

Indiana Has Essay Contest

Prizes amounting to $1,100 will be awarded to the pupils of Indiana elementary schools, who write the winning essays on fire prevention and fire protection in a contest which closed February 21, according to the announcement of Alfred Hogston, state fire marshal. There are twenty-eight prizes; the lowest being $25 and the highest $100. "How to Prevent Fires in the Community," is the essay subject.

In each congressional district, two prizes, $50 and $25 are offered for the two best essays. County contest chairmen must deliver the essays sent to them to the district contest chairmen before midnight, March 7.

The essay winning the first district prize must be sent to the office of the Indiana State Fire Marshal Department before midnight March 14th.

The winners of the two state prizes will be announced March 28. The first state prize is $100.; the second state prize is $50. The winning essays will be published in the Indiana Fire Prevention Quarterly, official organ of the State Fire Marshal Department.

Each essay will be graded as follows: 75% on treatment of subject and 25% on English used.

The judges of the district contest will be selected by the district contest chairman. The judges of the State contest will be selected by Mrs. Nellie M. Long, Chief of the Educational Division of the State Fire Marshal Department, who has active charge of the contest throughout the state. Mrs. Long reports that great interest is shown everywhere in the contest and the Department is receiving excellent cooperation from all quarters in its effort to make it both interesting and highly beneficial to the citizens of the whole state.

Apparatus Crash in Philadelphia—A ladder truck on the way to a fire in Philadelphia, Pa., crashed into a trolley. The truck was turning around the corner and the rear end of the truck crashed into the trolley. No one was injured.

WITH THE EDITOR

Fire Apparatus and Railroad Crossings

Much unfortunate delay has been caused to fire apparatus through being stopped by trains at grade crossings of railroads. This evil, especially in the case of long freight trains, has, in some instances, produced so serious a delay that the fire to which the apparatus has been summoned, originally a small blaze, has gotten beyond control before the department could get to the scene.

In a recent case in New York City, where the engines were held up for a considerable time at a crossing, the captain caused the arrest of the railroad watchman in charge. The attorney for the railroad advanced the argument that the delay was not serious as the fire companies were responding to an alarm for a grass fire. The battalion chief's answer is worth recording. He said: "The firemen are not thinking of their own lives when on their way to a fire, but are thinking of the people who may be possibly trapped in burning structures. We never know how serious a fire may be until we get there, and the slightest delay may mean the loss of a life. That is why we want a clear road and will not stand for delay while speeding to a fire."

There is no justification for the holding up of fire apparatus at crossings to allow long trains to pass, and especially during the time that freight cars are being shunted to and fro at switches or yards. Frequently such freight trains are moving slowly, or are at a standstill, at a crossing when it would be a simple matter to break the train on the approach of the apparatus to allow the engines to pass. A few vigorous protests, such as that by the battalion chief, against the unnecessary obstruction by the railroad trains, and the impositions of an occasional fine might do much towards accomplishing the desired results.

Revision of Building Codes

One matter that many cities will be compelled to take up sooner or later is the revision of building codes, especially those provisions dealing with fire protection and prevention.

If the matter were to be investigated, a very astonishing state of affairs might be revealed, particularly in regard to the antiquity of some of such codes now in force. What applied twenty to thirty years ago in this respect would be found obsolete and possibly dangerous. The regulation of inflammable roofs, the proximity of frame residences, the protection of openings, shafts and wells, the establishment of fire building zones and many other matters of vital importance were not much thought of in the old days.

Municipalities whose codes have not been revised since the memory of "the oldest inhabitant," have a big job cut out for them for the future. Modern building conditions require the most rigid regulatory laws to prevent erection of fire traps near high value property or endangering the lives of occupants by flimsy construction, glossed over by ornate and flashy decorations or make-shift outer furnishings designed to give the impression of safety and stability.

Cities and villages can well afford the time and effort required to carefully revise—and keep revised—their building codes. It's the surest way of avoiding trouble in the future.

Rural Fire Protection

A problem that is of vital importance to chiefs whose departments include outlying districts in which is situated considerable farming property is the matter of protecting such property from fire. These farms are generally pretty helpless as regards facilities for fighting fire, and, worse still, their water supply is generally limited to wells and small streams, which soon become exhausted when a pumper is drafting water from them at the rate of from 350 to 500 gallons a minute.

Fires in such farm buildings, too, are apt to be well advanced and well beyond the aid of chemical apparatus, by the time the apparatus can travel the distance from the city to the farms, often many miles out in the country.

A movement that has gained much impetus of late is the formation of township fire departments, supported mutually by the farming communities. Such a plan relieves the city or village fire department from the necessity of making long runs into the rural districts, in the meantime leaving the home city or town practically unprotected, or at least badly crippled in man power and apparatus, while the engine is on a distant alarm.

One plan that is in vogue in some of the western cities is for the farming community to purchase its own apparatus, house it in the nearby city, and then bear the expense of an added personnel to the local fire department. These men are recognized as part of the local department, and the apparatus can be used by the city in case of extra need. But both are considered primarily as a fire-fighting force for use in farm fires and are prepared to make a dash into the country whenever their services are needed at such a fire.

A plan of this kind is of mutual advantage to the farmers and the city, and the expense of upkeep and personnel is rendered less in each case. The plan also provides an efficient fire force always ready in case of

need to guard the farms from fire, and to act promptly when the need arises for a quick run into the rural districts. The plan has worked well wherever tried.

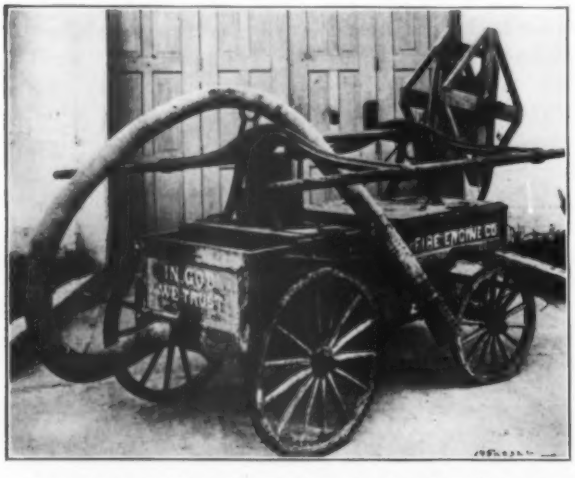
The 2% Tax on Insurance Companies Thirteen of the States of the Union now levy a fire department tax on insurance companies for the benefit of fire departments. There have been during the past year two or three attempts in the forty-six state legislatures in session to have passed bills to place this measure on the statute books of other commonwealths, but these were defeated.

The two per cent tax for the benefit of firemen is a measure that has accomplished much good, but incidentally, it does an injustice to insurance companies. While it is partially justified in principle—the fire departments being the biggest factors in preventing damage by fire, thus reducing the demands upon the funds of the insurance companies—it imposes upon the companies a special tax benefiting fire departments which are maintained to protect uninsured property as well as insured.

This is especially true of the portion of the proceeds of such tax devoted to taking care of injured firemen, those grown old in the service, and their dependents, in case of demise. Naturally, there is a strong lobby against this legislation. But isn't such opposition at least partially justified?

Date Set for N. Y. Chiefs' Convention

The New York State Fire Chiefs' Association will meet at Troy, N. Y., on June 5–7 in conjunction with the usual conference of city officials. The headquarters hotel has not been selected. For many years this association has been meeting at the same time that the annual conferences have been arranged for mayors and city officials of New York state.



One of the Oldest Fire Engines in the United States

This fire apparatus, originally purchased by St. Martinville, La., in 1810, is said to be the second oldest fire engine in the United States. The motto on the body dates back from the period when it was popularly believed that a visitation of fire was punishment for some religious violation. Note the long handles on each side of the apparatus which the volunteer firemen of that day worked up and down in order to force water through the short hose lines.

Chief Johnson to Retire

Chief Daniel E. Johnson of Bridgeport, Conn., a fire-fighter for the past thirty-eight years, has been granted a pension by the Board of Fire Commissioners to take effect on August 1, 1928. While his plans for the future are still indefinite, Chief Johnson who is still hale and hearty at sixty-seven, will probably enter another line of work, rather than to retire into private life.

Chief Daniel E. Johnson

"Dan" Johnson, as he is best known to fire officials throughout the country, started his fire fighting career on September 1, 1890, when he was appointed a call-man in the Bridgeport department—at that period a small organization. Two years later he was named a permanent man. He gave up his job as a molder at the Eastern Mallable Iron Company to give his entire time to fire-fighting.

At that time the department consisted of fifteen permanent men and five engine companies. All apparatus was horse drawn and the pumpers were of the steam type. Today the Bridgeport department is completely motorized with twelve engine companies, three truck companies and three chemical companies. Chief Johnson has been a big factor in bringing the department up to its high standard of efficiency.

As a permanent man Mr. Johnson was soon made tillerman, and in 1893 he was made driver of Engine No. 3. From driver of Engine No. 3 he was promoted to Captain of No. 1 Engine Company. On April 1, 1895, Chief Johnson took over the added duties of hydrant inspector. His next promotion was in October, 1908, when he was appointed an assistant chief. He became chief of the department on August 1, 1915.

Chief Johnson had an ambition to be a fireman even as a youngster. After his parents moved from Lowell, Mass., his birthplace, to Nashua, N. H., where he received his early education, he wanted to join the volunteers. He was unable to join because it was ruled that he lived too far from headquarters to answer alarms. Chief Johnson came to Bridgeport in 1886. It was only a few years later that he realized his ambition and was made a fireman.

"Bridgeport has been very fortunate in its fire losses under Chief Johnson," said Henry N. McCathron, president of the Board of Fire Commissioners. "He has built up the department so that it stands now second to none in New England and I might say second to none for a city of its size throughout the entire country. The biggest loss that Bridgeport has suffered in a great number of years and the greatest loss the Bridgeport Fire department has ever suffered, is felt in the retirement of Chief Johnson."

A successor to Chief Johnson will be named shortly by the Fire Commissioners.

T. F. MAGNER.

N. Y. Officers Join Eastern Group

The Chief Officers' Association of the New York Fire Department joined the Eastern Association of Fire Chiefs in a body. The latter organization is a sectional division of the International Association of Fire Chiefs. The section is now planning for their first annual convention that will be held this year in Philadelphia, the home city of Chief Ross Davis, president of the I. A. F. C.

Chief Condon of Randolph, Mass., Dead—John J. Condon, chief engineer of Randolph, Mass., died recently. As the funeral cortege passed the central fire station, the men and and apparatus were drawn up in review and the bells tolled. There was an escort of firemen, policemen and members of the Veteran Firemen's Association.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Hydraulics of Small Lines

To the Editor:

There are many firemen in the cities and towns of the Pacific Northwest who are receiving their first lessons in the use and handling of 1½-inch rubber lined hose. Of these there are a number who are not satisfied with the simple knowledge that it is easier to handle, etc., but wish to obtain all the working knowledge possible. Many inquire at the fire stations of the larger cities as to formulas and then return to their home towns little understanding the figures obtained, why they are used, and only the word of their informant as to correctness.

I have recently referred a number of these men to FIRE ENGINEERING, but believe a good turn could be done a great number if you would devote a column or two of your valuable space to such an important feature of the fire fighters equipment.

Answers to the following or similar questions would be of inestimable value to many who have ambition to be something more than, "Just a Hose Monkey."

1. What is the conversion factor for 1½-inch rubber lined hose and how is this factor obtained?

2. Explain the value of K for ⅜-inch and ⅝-inch tips as are commonly used on 1½-inch lines.

3. Three hundred feet of 2½ inch hose is laid to a Y connection, from which two lines of 1½-inch hose is laid. One line is 50 feet long with a ⅝-inch tip and the other is 100-feet long with a ⅜-inch; engine pressure is 125 pounds. What is the nozzle pressure at each and how many gallons flowing?

Hoping that your answers to the above will be of benefit to many of your readers, and wishing you continued success, I am,

M. W. W.

Answer 1. The factor for converting 1½-inch rubber lined hose to 2½-inch is 0.074.

Such factors are made up from the relative friction loss of different sizes of hose. This you may verify by comparing the friction loss in various sizes of hose of which you know the conversion factors and then checking up such friction losses. For example, the friction loss in 100 feet of 2½-inch hose carrying 300-gallons per minute is 21.2 pounds. This friction loss is approximately 2.6 times what the friction loss is in 100 feet of 3-inch hose carrying the same quantity of water. Thus 2½-inch hose may be said to have 2.6 times the friction loss which 3 inch hose would have where the length and the quantity of water flowing are the same. Then to change 3-inch hose to 2½-inch you divide the length of the 3-inch by 2.6 and it will give you the corresponding length of 2½-inch hose which has a like friction loss. And that is how the various conversional figures are secured—by finding the proportional friction loss in the different diameters of hose.

Answer 2. K for 2½-inch hose with ⅜-inch nozzle is 0.00198. K for 2½-inch hose with ⅝-inch tip is 0.01527.

Now, if you want to find the value of K on the same size nozzle with 1½-inch hose, it is only necessary for you to divide the value of K for the desired nozzle on 2½ inch hose by the conversion factor for 1½-inch hose which is 0.074. Thus for a ⅝-inch nozzle on 1½ inch hose we get 0.01527 divided by 0.074 or .206, which is the value of K for 1½-inch hose and ⅝-inch nozzle.

Likewise we secure the value of K for ⅜-inch nozzle on 1½-inch hose by dividing 0.00198 by 0.074, giving us 0.027, which is the value of K for ⅜-inch nozzle on 1½-inch hose.

Answer 3. Probably the easiest method of solving this problem, and at the same time securing quite satisfactory results, is as follows: Average your two lines of 1½-inch hose—50 feet and 100 feet, giving an average length of 75 feet.

Change each of these lines to 2½ inch hose. This will result in 1,015 feet of 2½ inch hose in each line.

Then, combine these two branch lines into a single line of 2½ inch hose by dividing by 3.6, giving us 282 feet of a single line of 2½ inch hose.

We already have 300 feet of 2½ inch hose in this line, so the combined line is then equal to 300 plus 282 or 582 feet of 2½ inch hose.

Next combine the two nozzles. This is done by finding the square of each nozzle, adding the squares, and then taking the square root of their sum. The square of ⅝ is .391.

The square of ⅜ is .141.

The sum of these two figures is .532, and the square root of their sum is .728.

As there is no size of nozzle of this diameter, the nearest standard size is used, which is ¾ inch.

Then we can consider the problem as made up of an engine at 125 pounds pumping through 582 feet of 2½ inch hose to a ¾ inch nozzle.

Next, find the nozzle pressure by the Underwriters' formula.

Nozzle pressure = engine pressure divided by (1.1 plus K times L).

N. P. = 125 divided by (1.1 plus .0316 × 11.6)

(K = .75 × .75 × .75 × .75 divided by 10 = 0.0316)

(L = 582 divided by 50 = 11.6).

In finding the value of K above, this is the method usually employed where K is not given in the table. Multiply the nozzle diameter by itself three times and divide by ten. The result is the value of K for the size of nozzle considered and 2½ inch hose.

N. P. = 125 divided by 1.467 or 85 pounds.

The flow from the nozzle will be 30 × ¾ × ¾ × square root of pressure or 156 gallons per minute.

The friction loss in the hose from the engine to the Y connection is found by the usual formula and is 3 × (2 × Q × Q plus Q)

= 3 × (2 × 1.56 × 1.56 plus 1.56)

= 19 pounds approximately.

The pressure at the Y connection will be equal to the pressure at the engine minus the friction that is lost in the hose from the engine to the Y connection, or 125 minus 19, giving 106 pounds.

Now, assuming this pressure at the Y connection as an engine pressure, we solve each of the two lines independently for nozzle pressures.

Using the Underwriters' formula and the values of K given previously we find in the case of the line with ⅝ inch nozzle, the nozzle pressure to be 79 lbs.

With the ⅜-inch nozzle the nozzle pressure is 89 pounds.

Discharge from the ⅝ inch nozzle at 79 lbs. totals approximately 104 gallons per minute while that from the ⅜-inch nozzle at 89 pounds is 39.7.

These two flows added together give 143.7 gallons per minute as compared with the first provisional solution using the combined nozzle and which totalled 156 gallons per minute.

In other words, assuming that the two nozzles were combined into a ¾-inch nozzle we get a total flow of 156 gallons per minute while when solving each line separately we get a total of 143.7 or approximately 144 gal. per minute which is a more nearly correct answer.

Friction in Linen Hose

To the Editor:

I would appreciate receiving the following information through your Questions and Answers Page:

With 150 pounds pressure at the hydrant, 300 feet of 1½ inch hose (unlined linen), and a ⅜-inch nozzle,

what will the pressure be at the nozzle, and what will the discharge per minute be?

Also kindly refer me to book by which I may solve this or similar problems.

I am a constant reader of your magazine and will appreciate your courtesy in answering the above.

M. J. R.

Answer: In an early issue of FIRE ENGINEERING will be printed a solution of a problem similar to the one you give. That solution, plus what we give below, we hope will be of some use to you.

The method of solving your problem is as follows:

N. P. = Engine pressure ÷ (1.1 K x L), where K is a factor depending upon the diameter of the nozzle and the diameter of the hose.

K for ¾-inch nozzle on 1½-inch linen hose is 0.051.

L is the number of 50 foot lengths of hose in the line and in this case is 300 divided by 50 or 6.

N. P. = 150 (1.1 + .051 x 6).

= 150 ÷ 1.406 = 106.5 lbs. approximately.

Discharge = 30 x d x d x p

d (nozzle diameter) = ⅜ inches, or 0.375 inch

p (nozzle pressure) = 106.5 pounds.

Discharge = 30 x .375 x .375 x $\sqrt{}$ 106.5

= 30 x .375 x .375 x 10.3

= 41.4 G. P. M.

Problems of this type and similar ones are treated fully in "Simplified Fire Department Hydraulics," the make-up of which is intended to assist those interested in the study of fire department hydraulics.

Pressure Loss in Suction Hose

To the Editor:

On our gravity pressure water system, the hydrants are equipped with a 4½-inch outlet for pumper connections. We carry on our new pumpers 10 feet of 4½-inch soft suction hose which has a 4½-inch connection on one end and 6-inch connection on the other end, the 4½-inch connecting to the hydrant and the 6-inch to the intake on the pumper. We also carry two lengths of 6-inch hard suction hose 10 feet each with a 6-inch to 4½-inch reducer for use on the hydrant outlets.

"A" claims there is a greater volume of water obtained at a pumper through 10 feet of 6-inch hard suction hose connected to a hydrant than there would be through 10 feet of 4½-inch soft suction hose.

"B" claims there is no more volume through the 6-inch hard suction than there is through the 4½-inch soft suction hose.

Your reply will be greatly appreciated.

G. A. F.

Answer: In the problem as you state it, there would be, for a given hydrant pressure, and given engine pressure, a slightly larger flow through the 6-inch suction hose. It would, of course, be negligible but nevertheless it would be a trifle larger than that through the 10 feet of 4½-inch soft suction hose. This is on the assumption that there is abundant supply of water under good pressure in the mains.

So slight would be the difference that there would be little choice between the two—and unless there was a likelihood of the engine operating at a point near a vacuum the 4½-inch suction would probably be employed because of its ease in handling.

Bear in mind, however, that the increase in flow secured by using the 6-inch suction hose is so small as to be unworthy of consideration in actual fire department operation.

Pressure in Extinguishers

To the Editor:

We will appreciate very much if you will answer the following questions:

1. What danger is there in a 2½-gal. chemical fire extinguisher if the hose is stopped up and the gases cannot escape.

2. What danger is there in a 45-gal. chemical tank under the above conditions, also one of the soda and acid type.

3. Explain in what value the bursting pressure is to dynamite. That is, explosive pressure of a 2½-gal. extinguisher to 2½ pounds of dynamite.

4. What is a civilian fire chief's pay in government service.

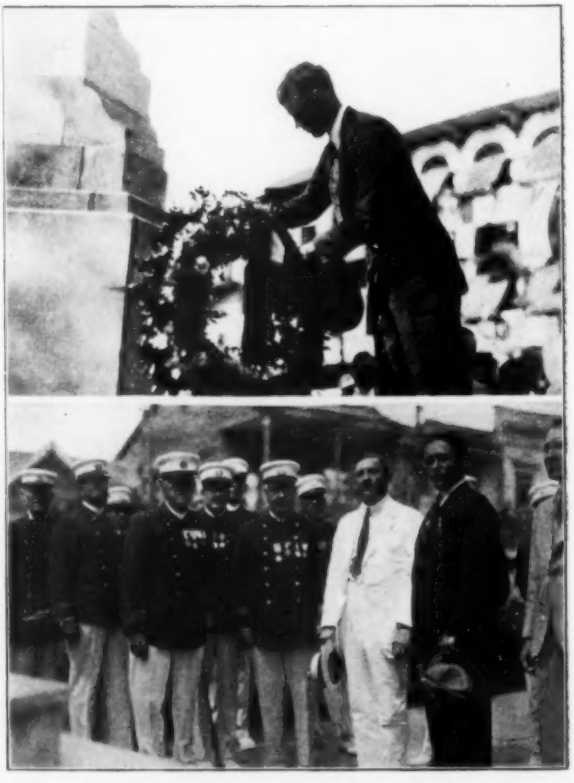
HEADQUARTERS STATION.

Answer 1: The usual practice in proportioning chemicals in a soda and acid extinguisher is to so proportion the acid and soda that when they are brought together they will create a pressure of 300 pounds maximum per square inch—when the nozzle is closed. In other words, you may expect to get a pressure around this figure if the nozzle of your extinguisher is stopped up and if the extinguisher is inverted, or the chemicals brought together by other means. What has been said for the 2½-gallon extinguisher may well be applied to the other sizes too. The chief danger in connection with a fire extinguisher when the nozzle is clogged is the bursting of the cylinder, particularly where the extinguisher has been in service for some years and where it has undergone more or less abuse. An extinguisher weakened in this manner may burst when subjected to the pressure caused by the reaction of the chemicals therein.

As to comparing the explosive force of chemical extinguishers to dynamite, there is no common ground for comparison. About the only thing that could be done would be to have such tests carried out by a capable engineer and from the results draw conclusions.

Answering your fourth question, no figures are available on the pay of fire chiefs in the U. S. Government service.

Sioux City, Ia., Firemen Want Pay Increase—Firemen of Sioux City, Ia., are again trying for a monthly pay increase of ten dollars. Members of the council stated that there was not enough funds on hand to finance this move.



Firemen at Panama City Welcome Lindbergh and French Aviators

Top, Lindbergh placing a floral wreath at the base of the Fire Department monument. Below, delegation of Firemen with noted French Flyers, Le Brix and Costes (at extreme right). These photographs were supplied through the courtesy of David F. De Castro, of the Panama Fire Dept.

EVERETT, MASS., OIL EXPLOSION KILLS AND INJURES MANY

Entire City Shaken by Explosion in Distilling House of Beacon Oil Company — Clothes Burned Off Workmen Near the Damaged Buildings

By A. B. WHITE

MANY employees of the Beacon Oil Company are dead, more than thirty-three injured, and others were reported missing following an explosion in a distilling house which shook the houses in Everett, Mass., and even Boston. Persons in the affected area were panic stricken as they saw a heavy black smoke cloud rise and obscure the sun. Men with their

Fighting the Oil Fire in the Beacon Oil Company Plant in Everett, Mass.

clothing afire raced about the yard seeking succor. Bodies were seen hurtling through the air.

A general fire alarm was sounded quickly and special calls were sent to Chelsea, Malden, Boston, and other nearby cities.

Despite the agonized cries of the injured, firemen were unable for more than one-half hour to enter the blazing area. With no preliminary warning, one of the low pressure vaporizers exploded with a terrific blast ripping the structure into shreds and blowing down nearby sheds. Men at work in the machine shop and boilermakers' shed nearby were hopelessly trapped.

The string of still explosions came in such rapid succession that many believed there was only one blast. Chief Philip E. Ham, of Everett, was assisted by Chief Daniel F. Sennot of Boston. Engine 1 of Boston, equipped with foam apparatus, was one of the first to reach the scene and was followed by engines 26 and 29.

The Beacon Oil Company occupies a tract of about fifty acres on the banks of the Mystic river in East Everett, opposite Charlestown. The stills affected form one unit of a total of about twenty-five in the plant. Most of those killed or injured were at work on this unit of stills and some were trapped in the machine and boilermakers' sections or on the roadway leading to both. When the fire was brought under control about two hours later, six of the stills had fallen and the other four were badly damaged.

Priests and clergymen from nearby parishes rushed into the burning area to administer the rites of the church to the dying men.

During the fire, the body of a man was seen pinioned beneath a portion of the wrecked still that had toppled over. Jagged pieces of steel had pierced the body and several tons of debris were scattered above. Unsuccessful efforts were made to free the body. Flames, fanned by a change of the wind, soon reached the trapped body and the men were forced to leave what was once a human, living person for fuel for the flames.

It was interesting to note that the first alarm to come to headquarters came through a box, the mechanism of which was set in operation by the force of the explosion.

Two district nurses who were at the city hall in Malden were the first to reach the grounds of the oil refinery. They gave first aid to many of the injured and later assisted the doctors who rushed to care for those suffering from burns.

Many of the injured were removed to the Massachusetts General Hospital and others to the Chelsea Memorial Hospital and the Whidden Hospitals. Relatives of those employed at the plant tried to break through the police lines in an effort to get an early glimpse of the bodies removed from the ruins. But the police were able to keep the crowds back. Women waited at the morgue as charred bodies were taken there for identification. Most of the dead were so badly burned that it was almost impossible to identify the bodies.

This is not the first time that fire has occurred in this plant. In 1921 there was a fire that singed ten persons, in 1922 ten men were killed and eight injured when an explosion wrecked the pump control station, and in the same year there was another oil fire. A series of explosions in 1925 shook the whole city. In 1926 two large agitator tanks were destroyed with damage estimated at $150,000. The following month, the same year, there were two oil fires. In all there were four fires at the plant in 1926. In 1927 a fire broke out when a feed line broke, and a two-alarm fire was started from a welding machine between two agitator tanks.

Two years ago an attempt was made to have the plant declared a public nuisance. In their complaint, property owners stated that the plant depreciated land values and the odor was a nuisance. The local judge who heard the case ruled against the property owners and the judge's decision was upheld by the Supreme Court.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending February 10

JUNCTION CITY, KAN.—Columbia Theatre bldg., destroyed	40
GARFIELD, MINN.—Village Hall and adj. property	45
TOLEDO, OHIO.—Several Tenement houses destroyed	80
HUMBOLDT, IOWA.—Strand Theatre destroyed	50
MYSTIC, CONN.—Hotel, cottages and garage	40
PERTH AMBOY, N. J.—Factory bldg. 397 East Ave.	25
BEAUMONT, TEX.—Mill of Kirby Lumber Co. at Voth	40
NEWPORT BEACH, CAL.—Property of Orange Co. Refinery	100
CEDAR RAPIDS, IA.—Business establishments destroyed	25
MANCHESTER, MASS.—Residence of G. Putnam of Boston	165
STONINGTON, CONN.—Cottages and Hotel, Lord's Point	80
MEMPHIS, TEX.—Plant of W. Texas Utilities Co.	30
EARLINGTON, KY.—Arnold tipple of W. Ky. Coal Co.	25

Courtesy, Rochester Times Union

Two Firemen Escape Death in Rochester, N. Y., Fire

It is the custom for hose captains in Rochester, N. Y., to enter burning buildings to discover advantageous points for bringing in hose lines. During a fire in a three-story brick building in that city used for furniture storage and residences, two men entered the building in accordance with the local practice. They made the second floor. The third floor overloaded by the immense amount of water that was poured on the flame, collapsed. Flaming office furniture and cascades of water fell on the second floor and that level broke through into the basement carrying the men with it. The burning material was extinguished as it fell into the water in the basement. Captain Mengel made his way out of a back window and ladder men assisted the other fire-fighter to safety. Luckily the men only received some slight bruises from the thirty-five foot fall. The fire had started from a blow torch that was used to thaw a frozen water pipe. Damage was estimated at close to $250,000.

ATLANTA, GA.—Dormitory of Oglethorpe University..... 40
TEXARKANA, ARK.—Trestle of Kansas City Southern..... 65
BAYONNE, N. J.—City Hotel partially destroyed..... 25
BOAZ, ALA.—Warehouse of Erstine Cotton Mills..... 25
JACKSONVILLE, FLA.—Business property West Bay St..... 25
NEW ORLEANS, LA.—Silver Slipper Cafe, Bourbon St..... 35
BILOXI, MISS.—Elmer Packing Co. destroyed..... 35
SHERIDAN, IND.—High school building destroyed..... 80
LIBERTY, MO. Gymnasium of Wm. Jewell College..... 25
KALAMAZOO, MICH.—Howard Block, North Burdick St..... 30
GRAND RAPIDS, MICH.—Muskegon Hotel destroyed..... 100
CARROLLTON, GA.—Carroll County Courthouse destroyed... 40
FOUNTAIN HEAD, TENN.—Advent Hospital destroyed..... 25
BOSTON, MASS.—South Baptist Church destroyed..... 65
COLFAX, IOWA.—"Rest Home" destroyed..... 25
MARSHALLTOWN, IA.—Witwer Grocery warehouse..... 80
STAPLES, MINN.—Fletcher Hotel destroyed..... 25
INTERNATIONAL FALLS, MINN.—Two business blocks destroyed 80
ESSEX FELLS, N. J.—Property of Essex Fells Country Club.. 40
GRAYSON, KY.—Methodist Episcopal Church damaged..... 25
HOLYOKE, MASS.—Plant of Germania Mills damaged..... 80
PHILADELPHIA, PA.—Former home of S. M. Clement, Jr... 25
SUPULPA, OKLA.—Property of Continental Refinery..... 165
BETHLEHEM, PA.—Potruch Bldg. damaged..... 80
ERIE, PA.—Plant of General Macaroni Co. destroyed..... 30
HASTINGS, PA.—Business and apartment bldg. destroyed.... 35
NORTH READING, MASS.—Wagon Factory and paint shops.. 65
DYERSBURG, TENN.—Several business establishments damaged 40
SCOTTSVILLE, KY.—Crystal Theatre and adjacent property.. 50
MONTREAL, QUE.—Premises occupied by Locks Footwear Co. 100
GARFIELD, MINN.—Postoffice bldg. and adjacent property... 65
ST. JOSEPH, MO.—Plant of Muchenberger Wall Paper Co.... 100
PLAINFIELD, N. Y.—Plant of Washington Spring Water Co.. 30
STANLEY, VA.—Plant of Stanley Milling Co..... 165
BALTIMORE, MD.—Pythian Castle, Preston and McCulloh Sts. 40
RONCEVERTE, W. VA.—High school building damaged..... 65
GALVESTON, TEX.—Scottish Rite Cathedral destroyed..... 160
SUFFOLK, VA.—Laderberg Apartment, E. Washington St.... 60
HOLLAND, MAN.—Wheat elevator destroyed..... 25
WATERVILLE, N. Y.—Business section damaged..... 40
WEATHERFORD, OKLA.—Bungalow Theatre and adj. property 65
HENRY, VA.—Blue Ridge Talc Company's plant..... 65
HUNTINGTON, W. VA.—Plant of Bailey-Farrel Mfg. Co..... 65

Week Ending February 17

NEW BRITAIN, CONN.—South Congregational Church damaged 80
WESTFIELD, N. J.—Residence of John Platt destroyed..... 70
TALLADEGA, ALA.—Four business establishments..... 80
REISTERSTOWN, MD.—Business section damaged..... 165
TORONTO, ONT.—St. Catherine street business property.... 80
PHILADELPHIA, PA.—Cramp's Shipyards damaged..... 80
TIMPSON, TEX.—Residence of M. O. McDowell destroyed.... 30
LONG BEACH, CAL.—Plant of Signal Gas Co. damaged..... 80
WORCESTER, MASS.—Houghton block in business district.. 45
NILES, MICH.—Factory of Ultra Nu Basket Co. damaged .. 50
WHITEWATER, WISC.—High school building destroyed..... 50
FLINT, MICH.—Property of Genesee Lumber Co..... 80
HIBBINGS, MINN.—Nides Brothers and adj. property..... 160
RUDOLPH, OHIO—Business property damaged..... 25
STEWART, B. C.—Four bldgs. of Premier Mine Co..... 65
WYANDOTTE, MICH.—Schneider Clothing Store destroyed... 50
FRANKLIN, MASS.—Morse Opera House Block damaged..... 250
EASTPORT, ME.—Berman store and adj. buildings..... 165
EASTON, PA.—Pavilion at Bushkill Park destroyed..... 35
READING, PA.—Berks Furniture Co., Penn St..... 30
GREENVILLE, S. C.—Miller Carnival Co. equipment, Camp Sevier 125

Forty Injured in Boys' Boarding School Fire in Quebec

Quebec, Canada, has had another bad school fire. The St. Jean Berchaman's Boarding School which cares for 142 boys between the ages of five and fourteen years, was destroyed by fire. Many of the nuns and boys were at the point of death before they escaped from the burning building. Forty children were injured but luckily no lives were lost.

EVERETT, MASS.—Beacon Oil plant damaged..... 65
BRONX, N. Y.—Garage, 1379 Sedwick Ave., destroyed..... 100
BAYONNE, N. J.—Pier of Tidewater Oil Co. damaged..... 100
BELOIT, WISC.—Factory of Dupke Paint Products Co..... 40
MARTINSVILLE, VA.—Mountain View Hotel..... 90
BATH, PA.—Plant of Bath Silk Company destroyed..... 80
GLOVERSVILLE, N. Y.—Glenwood Silk Mills damaged..... 30
CREAL SPRINGS, ILL.—General store of S. Brim destroyed.. 25
SPRINGFIELD, ILL.—Wolfson Furniture Store damaged..... 25
ST. PAUL, MINN.—C. W. Olson Mfg. Co., Quincy St..... 25
LOUISVILLE, KY.—B-J Products Co. and adjacent property.. 70
SHARPSVILLE, IND.—High school building destroyed..... 50
FRONTENAC, KAN.—Main business block destroyed..... 80
JACKSON, MISS.—Texas building and adjacent property.... 40
HAMMOND, IND.—E. L. Shaver Auto establishment..... 40
GRAND CROSSING, FLA.—Warehouse of Fruit Growers
BEAUFORT, S. C.—Schein Bldg. and adjoining property..... 40
GREENFIELD, OHIO—Gray Elliott Furniture Plant..... 70
FEDERALSBURG, MD.—Masonic Temple and adj. property....100
WEST RUTLAND, VT.—Main Street school building..... 25
GAINESVILLE, GA.—South Main St. business property..... 40
BEDFORD, PA.—Oppenheimer Building destroyed..... 50

Naugatuck, Conn., Has Bad Fire

The first fire which necessitated the calling out of every available piece of fire-fighting apparatus in the town of Naugatuck, Connecticut, and also assistance from Waterbury, completely

Outside Apparatus Was Called to Fight This Fire in Naugatuck

destroyed the Union City post office, a block of twelve stores and twelve tenements in the heart of the town at 3:10 a. m. on the morning of January 21. The resulting damage was estimated at $110,000. Twelve families, including twenty children, were forced to flee from the building into the severe cold only scantily attired.

For four hours the Naugatuck fire department under the command of Chief Timothy Fitzgerald fought the blaze, and was ably assisted by Chief Henry H. Heitman of Waterbury, who responded with a company from his city shortly after the fire started. The Linsky Block, which is located on the Naugatuck-Waterbury state road, was completely demolished. Flames soon spread to a building on Union street. Only the walls remained standing of the building when the fire was extinguished. The United States post office, a one-story brick building, was gutted. Several valuable pieces of mail matter were lost, but the largest part of the parcel post mail was in a 800-pound safe and was saved.

T. F. MAGNER.

Bristol, Conn., to Have New Fire Stations—Steps are being taken for the erection of a new fire station in Bristol, Conn.

John G. Gamber with Sentry Safety Control—John G. Gamber, state fire marshal of Illinois for eleven years, is now general sales manager for the Sentry Safety Control with the main office and factory located in Philadelphia, Pa.

Plans Made for Southeastern Chiefs' Association—Members of the executive committee of the southeastern section of the International Association of Fire Chiefs held a meeting in Atlanta, Ga., to make plans for the annual convention that will be held in Atlanta on July 5-7. Chief William B. Cody is chairman of the executive committee and Harry Whitner of Hickory, N. C., is secretary of this district organization.

DETROIT REPORT WARNS OF DANGER FROM PAINT SPRAYING PROCESSES

Use of Quick-Drying Lacquers Blamed for Large Part of Fire Hazard—Insurance Clearing House Suggested to Lower Losses

By WM. JEROME DALY

FIRE losses of $5,712,565 for the year 1927 are reported by the Board of Fire Commissioners of Detroit, Mich.

According to G. S. Goldwater, chief fire marshal, who prepared the statistical report for the commissioners, this figure is an increase of $2,168,905 over the year 1926, and is attributed to one fire last Fall in the Briggs manufacturing plant for automobile bodies. The loss amounted to $2,266,172 and proved to be the largest Detroit has had in many years.

Eliminating the Briggs fire from the computation, the losses for 1927 would have been $3,446,393—a decrease of $97,267 under the year 1926.

Cause for Many Fires

The report contains a timely warning in fire prevention, in that it courageously points out that—"the most recent and possibly the most hazardous process we have to consider today is the prevailing method of applying paint and especially pyroxylin lacquer by spraying. This involves a serious consideration of arrangement and protection that these fires may not result in loss of life and damage to other processes and goods.

"The serious losses in this process have been due mostly to ignoring the danger on the part of those interested in production, and to improper fire protection. It is safe to say that all these fires may be easily controlled. It is only necessary to recognize that they are extremely quick fires, releasing a large amount of heat in a very few minutes, so that ordinary fire protection cannot cope with the hazard. It is essential therefore, that a proper ordinance be enacted for the regulation of these highly dangerous hazards, as well as an outline of special protection needed for this hazardous process.

"Fire inspection has revealed that excellent buildings, built of fire-resisting material have been made burnable fire traps by production managers or maintenance men filling them with wooden partitions, platforms, hanging shelving and other products of the lumber industry, although for years there have been on the market many non combustible materials from which partitions and enclosures may be built, even at less cost than if built of lumber. The appeal for a sensible internal arrangement of buildings is stressed very forcibly by Fire Inspectors to owners and tenants regarding these matters.

Building Laws Need Adjustment

"A very large part of the excessive fire loss is due to antiquated building laws. Even in the thickly settled parts of the city wooden construction is freely allowed, and excessive size of wooden buildings is permitted. The dangerous wooden shingle is still permitted and dilapidated buildings are allowed to stand. All these conditions tend to increase the fire loss, and especially by exposure. Above all, the wooden shingle lays our city open to the dangers of a conflagration. A long background beginning with improper building construction will continue to be the cause of sweeping fires. Such sweeping fires will continue to occur until time intervenes whereby fire-resistive building construction will take the place of improper building construction, or dovetail into it, which will serve as fire stops."

During the year, the department made a total of 56,888 inspections or details, as follows: buildings 42,507; buildings reinspected 7,651; theatre details at night 5,336; citizens' complaints investigated 737; film exchanges 383 and bazaars, schools, churches, etc., 274. Hazardous conditions remedied 29,658; building defects reported 1,368.

The Department of Buildings issued licenses or permits as follows: garages 96; steam pressing boilers 172; boiler operators 183; inflammable liquids 179; acetylene torches, welders, etc., 140 and paint, oil and varnish 48.

The department examined 254 plans relative to standpipe installation. There were only twenty-six fires requiring more than one alarm—twenty second alarms, two thirds, two fourths and two fifth alarms. Inspectors investigated 931 fires and the Arson Squad investigated 512.

Summary of Fire Calls

Of 11,129 calls during the year, 8,783 were for actual fires, 805 were alarms without any fire, 1,123 were false, 16 were outside the city, 402 were special calls.

There were thirteen fires entailing losses of more than $30,000 each. The Briggs fire leads the list and the second largest was on December 26th last and estimated at $250,000. There were 5,359 fires where no loss was reported, 1,418 fires of less than $100 loss, 1,102 between $100 and $1,000 loss; 529 were between $1,000 and $10,000; twenty-seven were between $10,000 and $20,000; eight were between $20,000 and $30,000 and 328 are still unsettled.

The losses of $5,712,565 embraced a property valuation of $180,130,281 carrying insurance of $160,038,016.

In the list of causes, automobiles naturally lead the list, since Detroit is the cradle of that industry, with 1,404 fires in automobile plants.

The Arson Squad handled 512 investigations of which 108 were incendiary fires. Of this number thirty-eight were set for insurance, thirty-three for revenge, thirty-two by pyromaniacs and five to conceal other crimes. This is an increase of 38.46 per cent over the year 1926 and is attributed to business conditions, increasing population and over-insurance. These "crooked" fires entailed a total loss of $318,372 which is 5.57 per cent of the total annual loss. The 26 fires set to defraud the insurance companies amounted to $216,862.64 in losses. The sum of $58,000 in insurance policies was surrendered on waivers of no claim by the assured.

The report concludes with this observation: "As long as the 'Agency and Premium' system of selling fire insurance is in effect, the only logical solution for the 'over-insurance' problem is a clearing bureau for fire insurance policies. Practically all of the policies are written for terms of one and three years and if a clearing bureau were established, at the end of three years there would be a complete record of all fire insurance carried in the city. It would then be an easy matter to determine whether or not any person or firm, who suddenly applied for large amounts of additional insurance, was entitled to it. Such a clearing bureau would materially assist in reducing the annual incendiary fire loss."

Attractive Calendar Issued

Now that many cities have had experience in fighting fires that have broken out in the top floors of skyscrapers, the calendar being distributed by the American-LaFrance and Foamite Company will strike a very responsive cord in fire circles. The illustration for the calendar presents some artist's conception of what fire-fighting might be like in 1975 if the present craze for larger and higher buildings continues.

The calendar is printed in red and black and is very attractive. It makes a useful business calendar.

American La-France and Foamite Co. Calendar

Hartford Will Revise Code

Philip A. Mason supervisor of buildings in Hartford, Conn., has been ordered by the commission to devote his full time, three days, each week to the revision of the building code.

As the work develops, a public hearing will be held to invite the opinion of the residents on the work accomplished. It is believed that a number of radical changes will be incorporated in the code.

At the present time, copies of the code under which the city is now operating, are almost exhausted. Rather than reprint the present rules which are in need of revision, the commission ordered the changes.

During the time that the code is being revised, Deputy Supervisor Ennis will be in charge of departmental operations.

Railroad Charged for Obstruction

"The firemen are not thinking of their own lives when on their way to a fire, but are thinking of the people who may be possibly trapped in burning structures. We never know how serious a fire may be until we get there, and the slightest delay may mean the loss of a life. That is why we want a clear road and will not stand for delay while speeding to a fire." That is the way Chief George Kellock of the Brooklyn division, New York Fire Department, summed up its charge against the Long Island Railroad because a watchman had prevented fire apparatus from crossing the railroad tracks while on the way to a fire.

The gate had been lowered, the railroad claimed, because of an oncoming train. They said that on a previous occasion some company had driven through the gates while on the way to a brush fire.

Chief Kellock stated that there is no way of telling how large or how serious the fire is until the firemen arrive. The case has been taken to court but the magistrate has reserved decision.

Fireman Killed in Roof Fall

John Dwyer, member of Hook and Ladder Company 78, of Tompkinsville, Staten Island, N. Y., was killed when he fell from an ice covered roof while fighting a fire in a city-owned coal pocket.

He was one of the first to reach the blaze and climbed a ladder to the corrugated iron roof dragging a hose after him. It was a cold day and the streams of water had frozen making the roof very slippery. Dwyer slipped. He tried to regain his balance but fell eighty feet to the ground.

An ambulance removed him to the Staten Island Hospital but he died later of a fractured skull and internal injuries. He was thirty-five years old and a member of the department for nine years. He is survived by his wife and four small children.

A sad part of the incident was that while Dwyer fell, his brother was fighting the fire from the fireboat Zopher Mills, on the other side of the building.

Dwyer was accorded a real fireman's funeral. More than three hundred firemen attended accompanied by the fire department band.

Chief Pye of Stoughton, Dead

Chief James J. Pye, of Stoughton, Mass., died on January 14, at his home in Stoughton at the age of 75. He was a veteran of the old hand engine days, with a record of more than fifty years service in the fire department. He was chief for twenty-one years.

He was born in South Boston on March 22, 1852. He lived for a time in Fitchburg and was a member of the fire department there. In 1872 he joined the old Pacific Hand Engine Company No. 1, of Stoughton. He was among the advocates of the purchase of a steam engine in 1880 and in 1906 arranged for buying horses for the fire service. Then in 1912 he took the lead in obtaining subscriptions for purchase of motor apparatus.

The Stoughton department was completely motorized in 1923 and last summer the new central fire station on Freeman Street was completed at a cost of $55,000.

Chief Pye also served as a police officer for 32 years and was custodian of the Stoughton Trust Company. He was a member of Stoughton Lodge, I. O. O. F.; Rising Star Lodge, F. & A. M.; Post 72, G. A. R. Association; Stoughton Veteran Firemen's Association; Firemen's Relief Association and of the Stoughton Methodist Church.

He is survived by his wife, one son, Capt. Fred H. Pye, of the Stoughton fire department, three sisters, and one brother.

HARRY BELKNAP.

Mine Safety Adds to Sales Force

The Mine Safety Appliances Company, Pittsburgh, Pa., announces the following additions to its sales personnel: The appointment of J. C. Calnon, 3604 Montana St., El Paso, Texas, as representative for western Texas and northern Mexico; the appointment of Charles R. Dever, 501 Dewey Park, Nanticoke, Pa., as an additional representative for eastern Pennsylvania; and the appointment of C. E. Noonan as additional representative in western Pennsylvania with headquarters at Pittsburgh, Pa.

Holden, Mass., May Purchase Apparatus—Holden, Mass., is considering the purchase of a combination hose and chemical wagon.

EMERGENCY COMPANY PART OF PITTSBURGH FIRE DEPARTMENT

Apparatus Constructed Along Special Designs—Chief McAuliffe and Assistant Chief Reilly of Chicago Trained Members of New Company

By WILLIAM E. PATTERSON

THROUGH the persistent efforts of Chief Richard L. Smith of Pittsburgh, Pa,. the department has installed an emergency squad company. The company was organized on April 16, 1927, but only eighteen hours after the company was established, it rendered service at a four-alarm fire.

The company has been placed in service in the downtown business district, with a crew of twelve men. A captain, driver and four squad men are assigned to each turn or platoon.

The apparatus was built from special designs by the American-LaFrance Fire Engine Company.

The body of the apparatus is constructed of heavy gauge sheet steel, heavily reinforced. It is 9-foot 5 inches long, 4-foot wide and 1 foot 11 inches deep. The forward part of the body is divided into three separate cross wise sections or compartments, each section approximately 1½ feet wide, 1 foot 11 inches high and 4-foot long with a door on the end of each section or compartment used to carry a part of the general fire fighting equipment. The rear half of the body, 5 foot 1 inch long is used to carry 50 salvage covers or tarpaulins. A tool box 5 foot 1 inch long, 14½ inches wide and 6½ inches deep, mounted on each of the running boards, divided into a number of sections carries the small fire fighting tools and equipment. A large electric

Members of Pittsburgh Emergency Squad Demonstrating Use of Pulmotor in Front of Apparatus

search light mounted on the front of the body, a Sterling siren and a locomotive bell are part of the equipment.

The equipment carried on the new apparatus consists of the following:

One forty-gallon chemical tank with two hundred feet of three-quarter inch chemical hose; two standard fire department type Foamite fire extinguishers; two ten-foot folding ladders; two Grether electric hand lamps; one six-pound fire department pick axe; one twelve-foot pike pole; one battering ram; one large crow bar; one claw tool; one New York lock breaker; one twelve-pound sledge hammer; one small cross cut saw; one two-man cross cut saw; one eighteen-inch hack saw with six extra blades; two hand oil torches, copper, Pittsburgh standard; one ten-ton jack with handle; one five-ton jack with handle; one double block and tackle with one hundred and fifty-foot of three-quarter inch hemp rope; one, one hundred and fifty foot coil of three-quarter inch hemp rope; one, one hundred and fifty-foot coil of one inch hemp rope; one large flood light with one hundred and fifty-foot of cord and attachment plug; two Draeger oxygen helmets; one Burrell "all service" mask; one Mc. Caa inhalator; one Ross fire hydrant thawing device; one Oxwell acetylene cutting device; one pair of goggles; one pair of asbestos gloves; two pairs of rubber gloves; one first aid kit; one Bresnan revolving cellar nozzle; two hatchets; six ball pein hammers with nail pouches; one, one and one-half inch auger; one two inch auger; one box of twenty-five sprinkler heads; four sprink-

ler torques shut offs; six brooms; six squeges; one roll of roofing paper and fifty Clifton, 12 x 18-foot salvage covers.

Through the courtesy of the National Board of Fire Underwriters of New York City and the Board of Fire Underwriters of Chicago, in answer to a request of Chief Smith of the Pittsburgh Fire Department, Chief Frank McAuliffe and Assistant Chief Edward Reilley of the Chicago Fire Insurance Patrol came to Pittsburgh to instruct the members of the new Squad Company in the proper care, handling and repairing of covers, the various methods used in covering up merchandise at fires, and the principal rules and regulations in force governing all classes of salvage work carried on by the Chicago Fire Insurance Patrol.

Owing to pressing business, Chief McAuliffe had to return to Chicago within a few days after his arrival, but Assistant Chief Reilley remained in the city for two weeks. He made his headquarters with the new Squad Company at Engine House No. 3, answering alarms with the company in order to give the members the benefit of his experience at actual working fires.

In addition to giving instructions to the members of the squad Company, Chief Reilley had classes at No. 3 Engine House each evening for men detailed from the various Truck Companies throughout the city. He also gave instructions to the Training School instructors on salvage work in general.

Salvage covers are now carried on all hook and ladder trucks, and salvage work is now a part of the various truck companies' duties.

Survey Being Made of Fire Departments

Letters have been mailed to fire chiefs by George J. Richardson, secretary-treasurer of the International Association of Fire Fighters asking for aid in collecting data on fire departments in the United States and Canada.

Replies to the questionnaire will indicate changes in the working condition of the firemen, changes in the salary scale, and changes in both the personnel and equipment of the department. The figures are tabulated and printed in an issue of the *International Fire Fighter*, the association's publication. A large amount of work is involved in obtaining the statistics that are published each year through Mr. Richardson's office.

Chiefs who have cooperated in sending in the necessary data will receive free, the copy of the issue containing the results of the survey.

Some of the information desired is the number of men in the department, the number and the type apparatus and the number of fire alarms received; the salaries paid to the firemen and the officers of the department. Has there been any change in pension or retirement fund during 1927? Is pension system a city ordinance or state law? Has there been any change in working conditions during 1927? Data is also desired on value of fire department property, buildings and equipment.

Boston Firemen May Get More Pay

Mayor Malcolm E. Nichols, of Boston, Mass., made the following statement during a recent address:

"The municipal group, consisting of the uniformed forces of the police and fire departments, should now be given serious consideration, as the city of Boston is below the standard of compensation maintained by other large cities. It is desirable by all means to declare the tax rate this year at a figure lower than the rate of last year, but if it is possible within a reduced rate to grant additional maximum compensation to the firemen and policemen, I shall include a sum sufficient for this purpose in the coming municipal budget for 1928."

HARRY BELKNAP

Berlin, Mass., to Purchase Apparatus—Berlin, Mass., will purchase a combination hose and chemical wagon.

Chief Erickson of Newburyport Made to Resign—Mayor "Bossy Gillis of Newburyport, Mass., has forced the resignation of Chief John Erickson and has named Captain C. F. Creeden as head of the department.

Babylon, L. I., Purchases Maxim Ladder Truck—Babylon, L. I., N. Y., has purchased a Maxim double bank hook and ladder city service truck through The Woodhouse Manufacturing Company local sales representatives. A total of 311 feet of ladders is carried arranged in a double bank superstructure. Mounted under the frame of the truck is a booster tank and booster pump. The truck is fully equipped with life saving appliances including life nets and so forth.

NEW ENGLAND FIRE CHIEFS PLAN FOR BURLINGTON CONVENTION

Secretary Invites Chiefs to Send Topics—Large Display of Exhibits Planned—Rail Transportation Fully Restored

THE sixth annual convention of the New England Association of Fire Chiefs will be held in Burlington, Vt., on June 26–29. The meetings and the exhibits will be arranged in the same building—a new structure that will be used for the first time. The Hotel Vermont has been named as the headquarters hotel. This year the convention will cover four days instead of the usual three. The committee is planning a wonderful time for those who will attend.

Frank M. Tiffany, of the Gamewell Company, 1022 Commonwealth avenue, Boston, is chairman of the exhibits committee. Chief William C. Shepard of Pittsfield, Mass., is president of the association, and Chief John W. O'Hearn is secretary-treasurer.

Chief John W. O'Hearn, of Watertown, Mass., secretary of the New England Association of Fire Chiefs, wants all fire department officials who have suggestions for subjects that they would like to have discussed at the convention in Burlington, Vt., on June 26–29, to write him their ideas as to desirable topics and speakers.

A program is planned to take in problems confronting the chiefs of small town departments as well as the hazards of the larger cities.

There will also be time given for round table discussion. The plans for the convention are going ahead satisfactorily and Chief Carl D. Stockwell, of Burlington, has assured Chief O'Hearn and President Shepard that the roads in Vermont which were damaged by the floods last fall will be repaired and in first class condition by the time of the convention.

Passenger and freight service on the Central Vermont Railway has already been restored and the bridges and roadbeds that were washed out on the Boston and Maine Railway and on many of the public highways have been rebuilt.

Frank M. Tiffany as chairman of the committee on exhibits says there will be a large display of apparatus and department accessories in the new Memorial Auditorium which is only two blocks from the hotel that will be the convention headquarters.

Two Convicted of Arson Plot

After repeated questioning, two restaurant proprietors finally broke down and admitted that they had hired some men to set fire to their restaurant in order to collect on a $52,000 insurance policy.

The two men found shortly after they had opened the restaurant, that they were losing money at the rate of one hundred dollars a day. They decided it would be a wiser move to collect on the insurance policy. They hired two men to set fire to the place and paid them $700 with promise of a larger fee when the insurance money was collected.

The work of the incendiaries was very crude. When the fire department arrived they found carefully laid cotton fuses to various parts of the restaurant and fires started in about six different places. The blaze was extinguished with only $1,500 damage. The search for the accomplices was unsuccessful. The two principals were sentenced to terms of three years and three years, nine months.

Four Die in Railroad Shed Fire

Four members of a section gang of the Boston and Maine Railroad burned to death when seventeen freight cars jumped the track at Balloch station, N. H., crashed into the small frame building, overturned the stove, and set the building on fire.

The train consisting of thirty-two cars had just passed a siding near the Balloch station, five miles north of Claremont Junction. A car some distance back of the locomotive left the rails and was followed by sixteen others. The front and rear section of the train remained on the tracks. With the exception of the engineer and fireman, the train crew were all in the caboose at the rear.

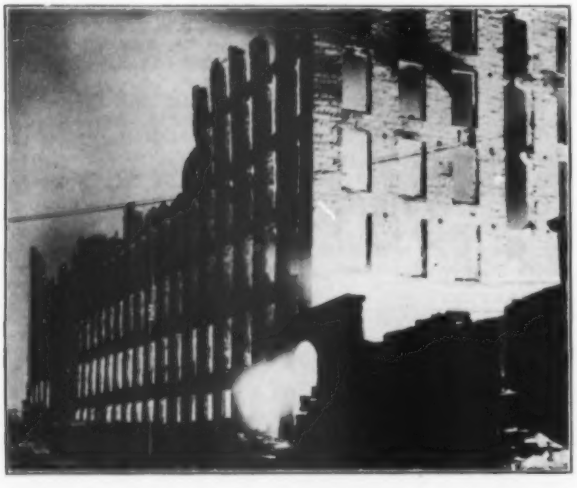
The men in the shed were eating their lunch when the accident occurred. They were unable to get out when the building collapsed. However, one man managed to crawl out and to drag another with him. But the others burned to death before they could be reached. Apparatus was sent from Claremont. Rails were torn up and telegraph and telephone wires were carried away by the crash.

Fall River Has Another Big Fire

(Continued from page 144)

Engine Company No. 26, the famous unit that went to the aid of Worcester on the occasion of the big fire there some years ago, was sent over the road to Fall River. This is a two piece unit, an American-LaFrance motor pumper and combination hose wagon and chemical. The limousine of Fire Commissioner Eugene C. Hultman was sent along, so that the firemen might have a chance to get warmed up and that drivers could be changed when necessary. Later, two more double unit companies, Engines 12 and 42, were sent to Fall River, also being accompanied by closed cars of department officers. These two engines were also American-LaFrance motor pumpers. Engine 26 went to work alongside the Providence companies and Engines 12 and 42 covered in at Fall River fire stations.

Other apparatus came from Swansea, Assonet, Fairhaven, Warren, and Bristol. Tiverton and Westport sent aid and so did Lakewood. Chief Edward F. Dahill, of New Bedford, took a stand with his men on Bedford



A Close Up View of the Pocasset Mills, Giving a Very Good Idea of the Destruction Wrought by the Flames

Street and by throwing a water curtain between two frame buildings prevented the spread of the flames in this direction. Engine No. 3, a large Ahrens-Fox pumper of the New Bedford department, was completely encased with ice but still hard at work when daylight came.

The Providence and Boston firemen working under Chief Charlesworth were in the thick of the battle and were instrumental in saving the Post Office and Federal Building. On Granite and Purchase Streets the Brockton firemen under Chief William F. Daley fought the flames in the rear of the Wilbur Hotel and on Bank Street they checked the northward spread of the fire.

Chief M. J. Cooney, of Lakewood, R. I., brought a motor pumper and 15 men and Chief Wilfred Monash, of Warren, came with an engine and seven men. Chief Joseph S. Lawton brought three pumpers and 15 men from Newport, R. I.; and from Taunton, Mass., Chief Fred A. Leonard came with a motor pumper and 16 men.

Chief Sullivan in General Charge

Chief Jeremiah F. Sullivan, of the Fall River Fire Department, was in general charge, and the apparatus was grouped on all sides of the fire zone. A number of times hydrants had to be abandoned and the engines moved to new locations as the spreading flames and crumbling walls endangered the men and apparatus. All of the engines in service were motor pumpers, not a single steam engine being in evidence.

On the morning after the fire the following engines were still at work: Engine 4, Fall River F. D., American-LaFrance pumper; Engine 9, Fall River F. D., 1000 gallon American-LaFrance pumper; Engine 1, Fall River F. D., 750 gallon Ahrens-Fox pumper; Engine 10, Fall River F. D., 750 gallon Ahrens-Fox pumper; Hose 3, triple combination American-LaFrance pumper of Providence F. D.; Hose 7, triple combination American-LaFrance pumper of Providence F. D.; Engine 3, New Bedford F. D., Ahrens-Fox pumper; Engine No. 12, Fall River F. D., 750 gallon American-LaFrance pumper; and Hose 4, triple combination American-LaFrance pumper of the Providence F. D.

Streets, Buildings and Apparatus Ice-Coated

The streets and portions of buildings that had been protected by hose streams were sheathed in ice. Hose lines were frozen in the roadways while engines and ladder trucks were solidly covered. Store keepers, lunch rooms, and the Salvation Army distributed hot coffee and sandwiches to the weary and frost bitten fire fighters. No one was allowed in the fire lines without badges or special passes. Newspaper photographers and movie men took pictures of the ruins and views were also taken from airplanes circling over the devastated area.

Fire Confined to Business Section

The list of buildings destroyed includes: Three buildings of the Pocasset Mills, Vermont Building on Pocasset Street, occupied by Nathan Miller plumbing shop; O'Hearn Building on Pocasset Street occupied by L'Independant Publishing Co.; old Herald-News Building; new Herald-News Building (damaged); Granite Block, Mohican Hotel, Rialto Theatre, Wilbur Hotel on North Main Street opposite Mohican Hotel, Temple Beth-El on Bank Street, buildings at the corner of North Main and Bedford Streets occupied by the Eagle and Famous restaurants and stores, the Buffington building, old Opera House, Howland Building, Premier Theatre, Citizens' Savings Bank, Metacomet Bank, Bay State House, municipal clinics building, two small frame buildings in rear of Wilbur Hotel, Fall River Co-operative Bank, Massasoit-Pocasset Bank Building, Inter-State Bus Terminal, Coughlin Building, Durfee Building, Waring Building, Union Bank, Berg Building, Allan Slade Building, Ye Tavern Building, N. P. Tessier Building, Bennett Building, and Fawcett Building.

The fact that no residences were destroyed and that the fire was confined to the business section prevented the usual suffering in big fires as in this case there were no homeless people to be cared for.

Fall River suffered from an extensive fire on February 16, 1916, when 20 buildings were destroyed in the South Main Street business section with a loss estimated at $1,500,000.

Bradford, Pa., to Purchase Apparatus—Bids may be invited soon for the purchase of a pumper for Bradford, Pa.

Dayton, O., May Have Fire Survey—At a meeting of the Chamber of Commerce of Dayton, Ohio, the plan of having a fire survey of the city was considered.

Convention to be Held in Turtle Creek, Pa.—The Allegheny County Firemen's Association will hold their convention in Turtle Creek, Pa., on June 28–30. This is the first time that Turtle Creek has been elected to entertain the convention.

CORRESPONDENCE

Dead Ends in Water System

To the Editor:

Dead ends in water systems have been criticized so often that one getss the impression that they are a decided disadvantage.

Is not the entire system of any city or town, dead ended in the strict sense of the term since the pressure on any hydrant can only be derived from the head of water at the source, whether the system operates by pressure or gravity?

The fact that an engine is stationed at the last hydrant or end of a main does not mean that the engine will not receive water or that it will operate inefficiently. The engine will not do its full share of work if the system happens to be overtaxed. Engines situated at more favorable points will even feel the burden under such conditions and go to draught.

Water departments when installing mains in blind streets should have some consideration for the fire hazards as well as the domestic needs.

Very truly yours,

T. D. C.

Frank J. Huber Sends Congratulations

To the Editor:

If not too late let me add my best wishes for another fifty years of good luck for a still better magazine, the best of health for its staff, and a continuation of the instructive and interesting topics it contains.

In the meantime, make the next 26 issues the "best ever."

Yours for the Fire Department,

FRANK J. HUBER,
Fire Fan.

Chicago, Ill., January 31, 1928.

Safety Measures Recommended

Through efforts of the Safety Council and the Chamber of Commerce in Springfield, Mass., working in conjunction with Chief William H. Daggett, of the Springfield Fire Department, a bill has been prepared for introduction in the Massachusetts legislature covering certain features of fire prevention and inspection for which it is desired that control be vested in fire departments.

Among the provisions brought up for consideration, were the following:

1. Require the use of metal receptacles for ashes, waste paper and rubbish except in one family dwellings.
2. Require the use of self-closing safety cans for volatile, inflammable liquids, such as gasoline, benzine, naphtha, etc.
3. Require that oily rags and waste, when not in actual use, be stored in metal containers with self-closing covers and riveted joints, the container being raised at least five inches above the floor on metal legs.
4. Prohibit the use of rubber tubing as connections for lamps, stoves and irons using inflammable gas for fuel.
5. Require that, within twenty-four hours after notice from the Chief of the Fire Department or his representative, conditions likely to cause fire or prevent or retard egress or ingress of occupants or firemen be corrected.
6. Provide for the inspection of any premises, building, structure or alley-way within the corporate limits of any city or town by the Chief of the Fire Department and those to whom he may delegate his authority.
7. Invest the Chief and his representatives with authority to order the correction of violations of Provisions one to five (above), inclusive.
8. Invest the Chief of the Department and his representatives with the authority to order an owner, lessee or occupant of property to remove debris, rubbish or any inflammable or combustible material which would tend to cause fire or retard easy egress or ingress. If the owner, lessee, or occupant cannot be notified in person within a space of twenty-four hours after an improper condition has been found, invest the Chief with the authority to have the condition remedied at the expense of the owner, lessee or occupant, the cost of the same to be collected by the City Collector through regular collection channels.
9. Provide that Civil action may be taken by the City against those failing or refusing to obey orders to correct conditions referred to in Provisions one to seven, inclusive, and against those failing or refusing to obey the requirements of Provision eight within one legal day.
10. Provide a penalty of $20.00 for each violation not corrected within the specified time limit, and that, continuance of the violation after the specified time limit shall constitute a separate offense for each consecutive forty-eight hours.

HARRY BELKNAP

McGuffin of W. S. Nott Company, Dead

W. E. McGuffin, for the past twenty-five years with the fire hose sales department of the W. S. Nott Company, Minneapolis, Minn., died suddenly on Tuesday, February 14.

During his many years in covering the northwest territory for this company he had made many friends among the fire chiefs and city officials.

The Late W. E. McGuffin

Dog Saves Life

A plasterer in New York city owes his life to the wisdom of a police dog.

When the man came home from work, he lay down in his bed with a lighted cigarette. Soon he was asleep. The cigarette fell from his mouth and set fire to the bed clothes. The smoke aroused the dog. The animal attempted to arouse its master but was unsuccessful.

The dog dragged the burning blanket into the kitchen and then returned, seized the man by the coat, and dragged him from the bed into the kitchen. The barking, together with the odor of smoke, attracted the neighbors who turned in a fire alarm. Firemen extinguished the blaze in the kitchen and bedroom before any great damage was done.

Burlington, Vt., Has Bad Fire

Damage estimated at $500,000 was caused on February 1, in Burlington, Vt., when flames destroyed the old 5-story Y. M. C. A. building and the adjoining McAuliffe Paper Company building. A large number of stores and offices were burned out. Two firemen and a civilian were injured by a falling wall. The police station and new city hall were threatened and a dozen roof fires were caused by flying embers. The burned buildings were in the heart of the city's business section. Chief Carl D. Stockwell directed the firemen and was assisted by a motor pumper from Winooski.

Maker of Remington Engine Wanted

R. S. Devereux, Castine, Me., would like to find the manufacturer of the Remington Rotary Fire Engine.

The community purchased the engine in 1898, but he believes the apparatus was built about 1887. The name is misleading as the pump is not of the rotary type. It has three horizontal reciprocating pumps which connect to a vertical crank shaft, each with its own pinion that engages with a horizontal master wheel. This wheel has two jack knife poles and two lead poles to which are attached two or four horses or fifteen or thirty men. The master wheel is turned around by the horses or men with a sweep motion. Therefore the name, "rotary."

The pump cylinders are about five or six inches in diameter with a nine-inch stroke. It will throw from 250 to five hundred gallons of water a minute.

Readers having the desired information are asked to get in touch with Mr. Devereux at the address given. He will greatly appreciate the courtesy.

Forest Fire Conference Held in Boston—Forest wardens from Essex, Norfolk, Plymouth and Bristol counties in Massachusetts attended a forest fire conference held in the Hotel Bellevue, Boston. Chief William F. Daly of Brockton, was one of the speakers.

Newburyport, Mass., Has Bad Fire—Apparatus from Salisbury, Amesbury and West Newbury were called to assist Newburyport, Mass., to fight a fire that destroyed the abandoned coal pockets of the Philadelphia and Reading Coal Company on the waterfront and two adjoining coal pockets. Chief C. F. Creeden, recently appointed, directed the firemen. A number of roof fires were caused by embers carried by the wind. Damage was estimated at $70,000.

PLANS MADE FOR FIRE SCHOOL AT PACIFIC COAST MEETING

Convention to Be Held in Sacramento in September—Course Will Not Interfere with Regular Session—Suggestions are Invited

ABOUT four thousand firemen from Pacific coast states are expected to attend the fire protection course which will be a feature of the thirty-fifth annual convention of the Pacific Coast Association of Fire Chiefs to be held in Sacramento, Cal. The officers and directors of the association met in San Francisco to go over the details.

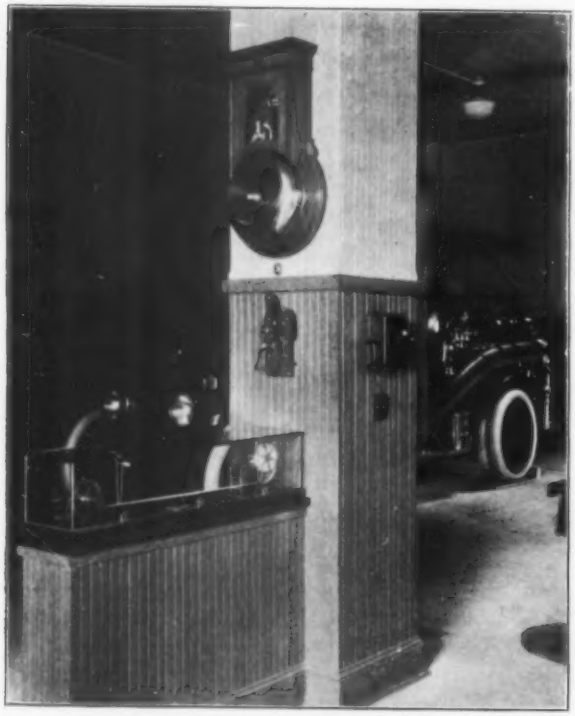
Chief Mark Ryan of Redwood City, Cal., and president of the Pacific coast organization presided. Chief Thomas Murphy of San Francisco sent a rescue squad of the department to demonstrate breathing apparatus.

The school will consider such important matters as dry cleaning and electrical hazards, theatres and film storage, basement and loft fires, oil and chemical fires, and matters of interest to volunteer fire department such as drills, equipment, organization, and financing.

A number of social features will break up the monotony of school work. There will be several get-together dinners, round table discussion, an association dinner and a dinner and ball.

At the meeting, the following chiefs were present: James F. McDill of Dunsmuir, Guy C. Macdonald of San Francisco, Walter E. Culver, J. H. Shively, chaplain of the association, Joe Wood of Renton, Wash., and Jay W. Stevens, state fire marshal and secretary of the organization. Meetings were held in the offices of the National Board of Fire Underwriters in the Merchants Exchange building.

The full details for the coming convention and school will be announced at an early date.



Gainesville, Fla., Has New Fire Alarm System

A new Gamewell fire alarm system has been installed in Gainesville, Fla., consisting of a 12-circuit switchboard, 10-circuit automatic repeater, motor generator sets, metal battery racks and 360 F. I. P. batteries in connection with a 15-inch gong, recording set, transmitting box, electric light switch and 60 of the latest Herculite boxes with Peerless non-interfering successive movements. Chief Beville is very proud of this installation.

President Bauer, of Pyrene, Dead

Walter Bauer, President of the Pyrene Manufacturing Company of Newark, N. J., died on February 12, in Newark.

Mr. Bauer's service as head of the Pyrene Manufacturing Company extended over a period of ten years, he becoming President in 1918. He had previously been connected for some years with the American Everready Company and the American Chicle Company.

Mr. Bauer's funeral was held in Fort Wayne, Ind., on February 15. Interment was at Fort Wayne.

How to Stretch Lines to 30th Floor

(*Continued from page* 146)

just a little more hose than rope so that the hose will have no strain on it. The strain is on the rope only. Anchor the roof rope to some substantial chock, pillar, radiator, balustrade, etc., and when the final or topmost hitch is made with the rope to the hose line, double the rope at this point so as to double its durability to meet the strain of a charged hose line, which is approximately three-quarters of a ton.

With an engine pressure of 250 pounds, the nozzle pressure on such a line should be thirty-six pounds with 226 gallons flow.

In both of the foregoing solutions of the skyscraper fire problem the proponents of each scheme included in their explanation the use of signals and lights to facilitate the execution of orders between the street level and the operating point above.

Chief Helm's solution was blueprinted and sent to all companies in the 2nd Division with the very humble explanation that the idea was largely that of Lieut. Edward Connors, of Engine Co. 20, in whose quarters Chief Helm is located. For two months they had collaborated on the plan. Chief Helm contends that the plan is simple because it can be supervised by one officer from one central point; that there are no kinks or bends in his line; that two lines are more dependable than one in case of burst, etc.

Chief Heffernan's plan grew out of his own bitter experience with a fire high up in a building next to the R. G. Dun Building at Broadway and Reade Street two winters ago where the standpipe parted in the cellar resulting in a fifth alarm and the extension of the fire into the top floors of the Dun Building. That night Heffernan promised himself that he never again would be confronted with such a situation without having some prescribed remedy known to every officer under his command.

Both plans seem to have their partisan supporters. Each of the respective deputy chiefs is an idol in his own division. The writer understands that there will soon be some sort of standard agreed upon and then included in the Fire College curriculum.

Boston After Traffic Violations

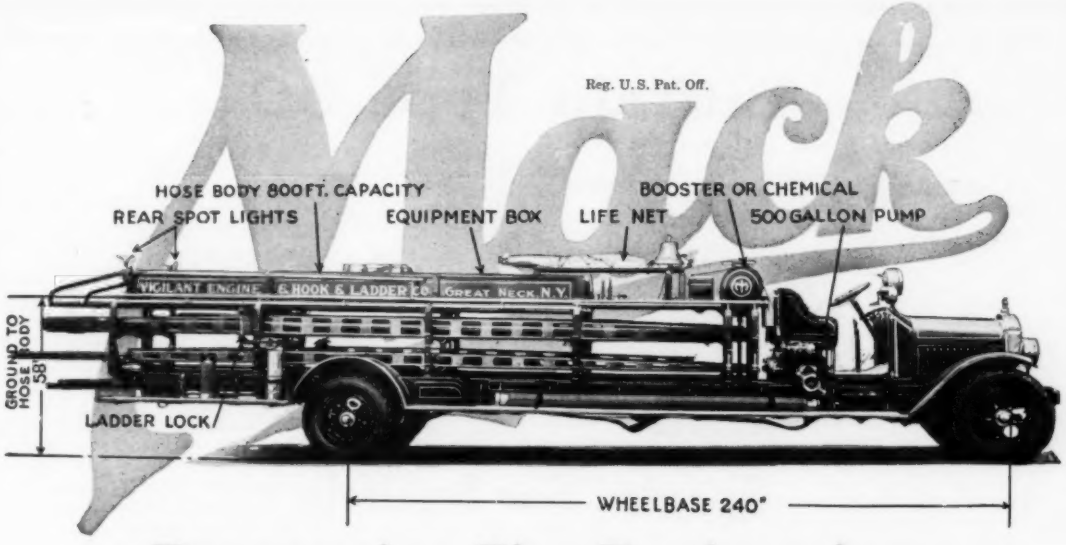
Fire Commissioner Eugene C. Hultman, of Boston, Mass., has started a campaign against motorists who fail to give the right of way to fire apparatus. He recently sent the following letter to Police Commissioner Herbert A. Wilson:

"Dear Commissioner: There are two laws upon the statute books designed in the interest of public safety as well as to allow the prompt response of fire apparatus to alarms; namely, one which provides that automobiles shall not follow within six hundred feet of fire apparatus responding to an alarm, and the other, that on the approach of fire apparatus automobiles shall draw over to the right hand curb and stop.

"Most automobilists seem to be entirely ignorant of these laws, and little or no attention is paid to them in this city. The regular traffic officers do a fine job in getting our apparatus through under very trying circumstances. If all the police officers should be informed in regard to the two above mentioned laws and some convictions obtained under them, it would facilitate the response of our apparatus to alarms and prevent accidents." (Signed: Eugene C. Hultman.)

By direction of Police Commissioner Wilson the following order was issued to all police divisions by Police Superintendent Michael H. Crowley: "I am directed by the police commissioner to call the above letter to the attention of division commanders and notify them to instruct officers to make prosecutions against all persons who deliberately violate the law when fire apparatus is responding to an alarm." HARRY BELKNAP.

Howe Apparatus Delivered to Ft. Loramie, O.—Howe motor apparatus has been delivered to Fort Loramie, Ohio.



Progressive Fire Engineering

THE Mack Quadruple Combination, shown above, is a practical unit especially designed for communities that must depend for protection on two or possibly three machines. No matter whether you already have a pumping engine, this Mack Quadruple Combination Job not only gives you a full equipment of ladders but provides additional hose-carrying capacity and an auxiliary pump that will prove invaluable during an emergency. All of which additional protection you can have at a small extra cost.

Note the ladders, 218 feet of them, mounted in double bank in order to keep a low gravity center. Also note the hose body, mounted on top where it is free from ladder interference, and within easy reach from the running boards.

The full line of Mack Fire Apparatus includes motors of either 4 or 6 cylinders and pumping engines with capacities ranging from 350 to 1000 gallons per minute. Send today for complete description and information.

MACK TRUCKS, INC.

INTERNATIONAL MOTOR COMPANY
25 Broadway New York City

One hundred and four direct MACK factory branches operate under the titles of: "MACK INTERNATIONAL MOTOR TRUCK CORPORATION", "MACK MOTOR TRUCK COMPANY", or "MACK TRUCKS OF CANADA, LTD."

SPECIFY

P-B All-Steel Anti-Skid Chains

when ordering new apparatus!

Tell the manufacturer you want P-B ALL-STEEL Anti-Skid Tire Chains—the chain approved by the Fire Chiefs Association. P-B Chains are in use on Salvage Corps and Fire apparatus in St. Louis as well as in many other cities. The tractor-traction prevents skidding or side slipping—makes turning and stopping positive. Links grip on any surface, yet never injure tires.

Write us for full particulars or let us send a representative to see you. Remember to specify P-B Chains in your order for new apparatus.

P-B MFG. CO., Inc. St. Louis, Mo.

Worcester Alarm Signals

A correct size for every town and factory. Steam or air operated. The design of these signals has been tested and approved by many years of service.

The long experience which stands behind this product is always at your service.

Ask for Catalog R-51

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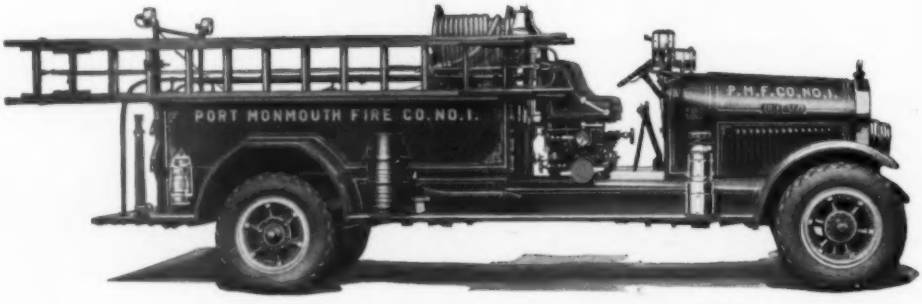
WORCESTER ALARM SIGNALS

Buffalo Type 50



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44 Central Ave., Buffalo, N. Y.

THE INTERNATIONAL LINE includes Speed Trucks for 1½, 1½, and 2 ton loads and Heavy-Duty Trucks for loads up to 5 tons. Municipal equipment available for every purpose. 136 direct Company-owned branches in the United States.

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606 S. Michigan Ave. Chicago, Ill.

INTERNATIONAL HARVESTER COMPANY TRUCKS

Solid Woven Cover Insures Long Service

Quaker Fire Hose combines all the essentials demanded for effective fire service—a tough inner tube that stands high pressure, and a strong multiple jacket with solid woven cover.

Many Fire Departments report Quaker Hose giving long years of service.

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Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

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Full Line Fire Dept. Supplies and Equipment.

New 43 Edition Catalog on Request

The Woodhouse Mfg. Co., Inc

156 Chambers St., New York

D. A. Woodhouse, Pres. and Gen. Mgr. George J. Kuss, Vice-Pres. and Treas

FIRE DEPARTMENT ACTIVITIES

Cambridge, Mass., May Have Drill Tower—Cambridge, Mass., is considering the erection of a drill tower.

Fennimore, Wis., to Have Apparatus—Plans are being made in Fennimore, Wis., for a community fire apparatus.

Frankfort, N. Y., Insures Firemen—Village officials of Frankfort, N. Y., have taken out a blanket insurance policy for twenty-five members of the fire department.

Bloomington, Ill., Improves Fire Alarm System—Equipment has been purchased with which to improve the fire alarm system of Bloomington, Ill.

Lakewood, O., Firemen Get Pay Increase—Firemen of Lakewood, Ohio, will receive a flat pay increase of $360. East Cleveland firemen will get a seven per cent. increase.

Coatesville, Pa., to Have Fire Alarm System—The new Gamewell fire alarm system being installed in Coatesville, Pa., for $15,000 is nearly completed.

Apparatus Speed Fixed in Burlington County—The speed of fire apparatus has been fixed in Burlington County, Pa., at twenty-five miles an hour.

Elgin Farmers Purchase Apparatus—The Elgin, Ia., Farm Fire Association purchased a Boyer apparatus mounted on an International chassis for $3,595.

Traer, Ia., Purchases Apparatus—A Boyer pumper has been purchased by Traer, Ia. The purchase was financed by a bond issue.

Jackson, Mich., Has Two-Platoon System—Fifteen firemen were added to the Jackson, Mich., department when the two-platoon system was put into effect.

Royersford, Pa., to Form Junior Organization—The Humane Fire Company of Royersford, Pa., will form a junior organization for boys from eighteen to twenty-one years old.

San Leandro, Cal., Wants New Fire Station—Firemen of San Leandro, Cal., want the voters, at the next election, to consider a $30,000 appropriation for the erection of a fire station.

Olean, N. Y., May Buy Aerial Ladder—The council of Olean, N. Y., is considering the purchase of an aerial ladder truck.

Sayville, N. Y., to Purchase Apparatus—Sayville voted, by a very small majority, to appropriate $15,000 for the purchase of fire apparatus.

Rent-Payers May Vote for Fire Appropriations—According to a bill introduced, rent-payers of Nyack, N. Y., may be granted the right to vote on the purchase of fire department equipment and apparatus.

Middleboro, Mass., Want More Time Off—Permanent firemen of Middleboro, Mass., are seeking one day off in three. They now have one day off in five. Most of the fire department force consists of call men.

Peabody Firemen Help Comrade—Firemen of Peabody, Mass., have formed a committee to raise funds to purchase an artificial leg for George C. Morgan, a veteran Peabody fireman who recently lost one of his legs.

Hempstead, N. Y., Receives New Pumpers—Hempstead, N. Y., has formally accepted three new Ahrens Fox combination pumpers and hose wagons. Purchase of the apparatus was authorized last March.

Chief Tamblyn of Aberdeen Removed—As the result of political changes, W. H. Tamblyn, head of the fire department in Aberdeen, Wash., for more than sixteen years has been removed from office. Charles Borum, assistant chief, has been named to fill the vacancy.

"Fire Brands" Sent to Southwestern Chiefs—A four-page folder "Fire Brands," has been sent to the fire chiefs in the zone of the Southwestern Fire Chiefs' Association urging them to attend the coming convention in Texarkana, Arkansas-Texas on March 15-16.

W. Rutland, Vt., Organizes Department—A fire department has been organized in West Rutland, Vt. They have purchased a Maxim 500-gallon pumper and a coding siren. Chief Koltonski of Rutland gave an interesting talk to the members of the new organization. C. L. Montgomery is chief.

Plans Made for Uniontown, Pa., Convention—Chief George H. Litman of Uniontown, Pa., has been chosen head of the committee that is planning for the state firemen's convention that will be held there on October 1-5. Earl Deane was chosen secretary.

Holyoke, Mass., Has Mill Fire—Several firemen were overcome by smoke, and Deputy Chief Michael Mahoney was cut by flying glass while fighting fire that broke out in the Germania Mills, Holyoke, Mass. The fire occurred while the sprinkler system was inoperative because of repairs.

Larger Pension Urged in Massachusetts—A bill is before the Massachusetts legislature that would protect the dependents of firemen killed in line of duty. It is suggested that cities and towns be required to pay the dependents $2,000 a year until the marriage of the widow or the attainment of majority by the children.

Jamestown, N. Y., Plans Improvements—Jamestown, N. Y., will make a number of improvements in the fire department. The council agreed to purchase a 1,000-gallon pumper and to appropriate $10,000 for the rebuilding of a down town fire station. They have also appropriated $10,000 for six or eight additional firemen to man the new pumper. A change in the firemen's pay has also been considered.

Chicago Chief Wants "L" to Carry Mains—Chief Michael J. Corrigan of Chicago has recommended that an 8-inch main be underslung from the "L" structure to convey water in case of fire. At various intervals along the water front, outlets will be installed so that a fire boat could connect to pump water into the system. Chief Corrigan stated that the plan would offer protection to the city in case some trouble developed with the water system during a catastrophe.

Southboro, Mass., Chief Presented With Watch—Chief Engineer Eugene Closson of Southboro, Mass., was presented with a gold watch and chain as part of the celebration commemorating the opening of the new fire station erected at a cost of $20,000. Among the guests were Chief Henry A. Brown of Marlboro, Chief T. H. Hackett of Westboro, Assistant Chief David McDonald of Marlboro and Chief John P. Crowe, deputy forest fire warden.

Changes Made in Boston Fire Department—The following promotions have been made in the Boston, Mass., fire department: District Chief Thomas H. Downey to deputy chief; Captain Napeen Boutillier to district chief; Lieutenant Edward F. McCarthy to captain; Fireman Michael J. McLaughlin to lieutenant; Lieutenant William F. Donovan to captain; Edwin F. Fay, William M. Phelan and John A. Morrissey to rank of lieutenant. Deputy Chief Joseph A. Dolan has retired.

Assistant Chief of Granite City Killed—John Charbonnier, second assistant chief of Granite City, Ill., died as the result of injuries received when the pumper on which he was riding crashed into an automobile. He was thrown to the sidewalk. Chief Charbonnier was a member of the department for seventeen years. He is survived by his widow and children. As is usual in such accidents, the chief was responding to a small blaze that was extinguished by the one who turned in the alarm.

Nashua, Ia., Limits Apparatus Runs—The fire apparatus of Nashua, Ia., must not leave the city limits. Recently a town nearby sent its apparatus to aid a neighboring community. A fire broke out at home and destroyed a building. The fire insurance company refused to pay the policy on the ground that by taking the apparatus outside of the limits, the policies became void until the apparatus had returned. The city is willing to purchase additional apparatus for rural fire protection if the farmers cooperate.

New Trade Literature Received

The following literature descriptive of up-to-date methods and equipment for fire departments, has just been issued for general distribution, and can be procured by writing to the concern mentioned. Those desiring additional trade literature in which they are interested can use our regular "Information for Buyers" page, listed in the Advertising Index.

French & Hecht, Springfield, O.—"Wheels for Roadwork," a forty-eight-page illustrated catalogue of the various type wheels manufactured by this company.

The Ahrens-Fox Fire Engine Co., Cincinnati, O.—"Whence They Came," a thirty-six page booklet describing various stages in the development of modern fire apparatus; illustrated with sketches and photographs of both old and modern fire apparatus.

PROPOSED IMPROVEMENTS

New Orleans, Orleans Co., La.—John M. Evans, Chief of Fire Dept., recommended erection of several new fire stations.

East Liberty, Allegheny Co., Penn.—Plans and specifications ordered drawn for new fire station at North Euclid Ave. and Broad Street.

Bay City, Matagorda Co., Tex.—Petition is being circulated calling for an election to vote on an issue of fire station bonds.

Rock Island, Rock Island Co., Ill.—City Council considering submitting to voters at city election the issuance of fire station bonds to the amount of $200,000.

Dillsboro, Dearborn Co., Ind.—Town Council appointed committee to organize a volunteer fire dept. Charles Berner, Chief.

Oceanside, San Diego Co. Calif.—Fire department to raise funds for purchase of new equipment.

Modesto, Stanislaus Co., Calif.—Expenditure of $16,000 for purchase of ladder truck was authorized by City Council. George Wallace, Chief of Fire Dept.

West Stockbridge, Berkshire Co., Mass.—An appropriation of $8,000 was made for the purchase of a new pumper for the local department.

Stoughton, Norfolk Co., Mass.—City planning purchase of new apparatus for fire department according to reports. Henry M. Bird Chief.

Upper Marlboro, Prince Georges Co., Md.—Pumper to be purchased for the Upper Marlboro Volunteer Fire Dept.

Montclair, Essex Co., N. J.—Plans are being made for the purchase of new piece of apparatus for local department, according to reports.

Utica, Oneida Co., N. Y.—Reports state Council is making plans for purchasing the following for the fire department: pumper, car for chief, water tower, 8,000 feet fire hose and other equipment.

Hydrant Lines Would Have Helped

(*Continued from page* 148)

to the front of the building to assist the hydrant lines from hydrant No. 6.

These four hydrant lines can very easily take care of the burning coal and wetting down such, as well as covering the water works pumping station.

Assuming that the four lines operating from the three engines on the coal pile cannot prevent the rear wall from falling, just as soon as the rear wall drops the efforts of the two lines on the garage roof should momentarily be directed in wetting down the oil tanks together with the line from Engine Co. No. 3.

The line from Engine Co. No. 1 can still continue to wet down the interior of the coal pocket and prevent fire from gaining in intensity.

The four hydrant lines and the large stream from Engine Co. No. 1 should be able to handle the Smith Street side of the fire very easily.

The two 1¼-inch lines from Engine Co. No. 2 together with the 1¼-inch stream from Engine Co. No. 3 ought to be able to handle the oil tanks and rear of the coal pocket. If the coal pocket is quickly wetted down there will be little danger of fire entering the garage or other buildings in the neighborhood of the fire building.

If, however, there appears to be any danger of such, one of the lines from Engine Co. No. 2 should be stretched into the garage to cover this exposure from the inside.

Although one of the oil tanks may take afire as described in the last article on the handling of the fire, the other tanks alongside it can be wetted down with the three 1¼-inch lines and the fire confined to the single tank.

Apparently this department has no foam apparatus so such cannot be called into use for operating on the fire in the first tank or any other of the tanks if they should become involved.

However, it is believed that the above assignment of apparatus and lines would be able to handle the situation and confine the fire to the coal pockets.

Watertown, Mass., Fireman Dismissed.—A policeman and a fireman were found guilty of sounding false alarms on New Year's eve and dismissed from the service.

CONVENTION DATES

May 7-10—NATIONAL FIRE PROTECTION ASSOCIATION (International). 32nd Annual Meeting, Atlantic City, N. J. Secretary, Franklin H. Wentworth, 40 Central Street, Boston, Mass.

May 10-11—ARIZONA STATE FIREMEN'S ASSOCIATION. 5th Annual Convention, Bisbee, Ariz. Secretary, Chief W. J. Nemeck, Douglas, Ariz.

June—WISCONSIN STATE FIREMEN'S ASSOCIATION. 41st Annual Convention and Tournament, (tentative date) about middle of June, at Kiel, Wis. Recording secretary, E. Philip Mueller, Jefferson, Wis.

June—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 34th Annual Convention and State Firemen's Training School (tentative date), Blackwell, Okla. (Exact date to be fixed by Executive Board.) Secretary, Charles Slemp, 651 East 12th St., Oklahoma City.

June 5-7—KENTUCKY STATE FIRE CHIEFS' AND FIREMEN'S ASSOCIATION. 10th Annual Convention, Middlesboro, Ky. Secretary, Captain S. G. Render, Fire Department Instructor, 303 Speed Building, Louisville, Ky.

June 5-7—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. 22nd Annual Convention, Troy, N. Y. (meeting in conjunction with Mayors' Conference). Secretary, Chief John H. Golden, Cohoes, N. Y.

June 16—LEBANON COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Palmyra, Pa. Secretary, William I. Kutz, Box 233, Myerstown, Pa.

June 19-21—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 39th Annual Convention, Kingston, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y., Fire Department.

June 20-23—PROVINCIAL FEDERATION OF ONTARIO FIRE FIGHTERS. Annual Convention, King Edward Hotel, Toronto, Ont., Can. Secretary-Treasurer, David H. Lamb, 132 Bellevue Avenue (2) Toronto.

June 25—NORTHWEST FIREMEN'S ASSOCIATION. Semi-Annual Convention, Centerton, Ark. Secretary-Treasurer, F. M. Brock, Bentonville, Ark.

June 26-29—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 6th Annual Convention, Burlington, Vt. Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass., Chairman, Exhibit Committee, Frank M. Tiffany, Gamewell Company, 1022 Commonwealth Avenue, Boston.

June 28-30—ALLEGHANY COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Turtle Creek, Pa.

August—UTAH STATE FIREMEN'S ASSOCIATION. 21st Annual Convention, Binham Canyon, Utah. (Date to be set at April meeting.) Secretary, Harris E. Anderson, Fire Headquarters, Salt Lake City, Utah.

Aug. 22-24—VIRGINIA STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention, Ocean View, Va. Secretary, Chief J. B. Gordon, Newport News, Va.

Sept. 18-19—IOWA FIREMEN'S ASSOCIATION. 51st Annual Convention, Independence, Ia. Secretary, E. E. Parsons, Marion, La.

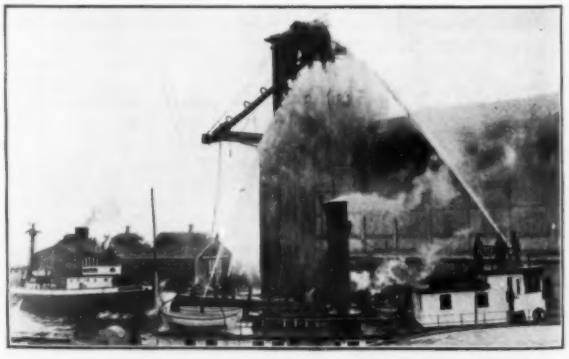
Sept. 18-23—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention and School of Instruction for Firemen (Tentative Date), Sacramento, Cal. Secretary, State Fire Marshal Jay C. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.

Oct. 1-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. Annual Convention, Uniontown, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 9-11—RAILWAY FIRE PROTECTION ASSOCIATION. Annual meeting, place to be selected later by Executive Committee. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

Oct. 22-24—KANSAS STATE FIRE CHIEFS and FIREMEN'S ASSOCIATIONS and WOMEN'S AUXILIARY. 13th and 42nd Annual Conventions and 3d Meeting, respectively, Liberal, Kans. Secretary, Chief K. D. Doyle, Wamego, Kan.

Marshfield, Ore., Presented with Gold Badge—Chief H. Lacocq of Marshfield, Ore., was presented with a gold badge by members of the department in honor of his sixteen years' service.



Coal Pocket Fire at Which One Fireman Lost His Life

A fireman was killed when he fell from the slippery roof of the coal pocket. At the left is the fireboat William J. Gaynor and at the right the fireboat Zophar Mills. Twelve firemen were slightly injured in fighting the blaze.

MATHEWS

(Reg. U. S. Pat. Off.)

FIRE HYDRANTS

for

DOMESTIC

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HIGH PRESSURE

Service

NOTE—

The positive waste value.

All operating threads are dry, being above the stuffing-box.

No toggles, no small, quick-wearing parts.

All moving parts are bronze or bronze-bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

An easily installed
EXTENSION SECTION
readily adapts them to new grades.

VALVES and BOXES
CAST IRON PIPE
(Sand-Cast or "Sand-Spun")
FITTINGS

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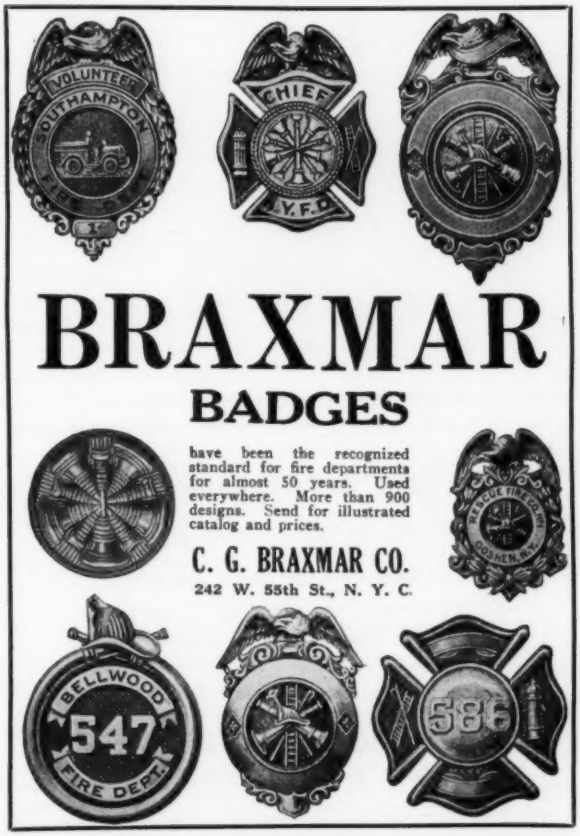

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Served 10 years as a permanent fireman in Worcester, Massachusetts, received patent on Angle Nozzle January 15, 1915, and in 12 years has covered the world with Angle Nozzles. "The sun never sets on them."

Take a tip from Blanchard and save your men.

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1320 Ridge Ave., Philadelphia, Pa.
Established 1864

Clay Automatic Door Spring Devices for fire stations save valuable minutes in getting to fires. Write for details.

When Lightning Strikes!

It Pays

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To Have Your Fire Alarm Protected With VAC-M Arresters

Recommended by Chiefs Everywhere

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Chemical Tanks and Lally Quick Opening and Self-packing Top for Chemical Tanks

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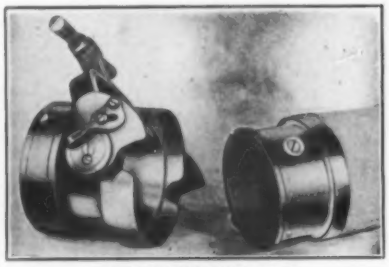

ECONOMICAL EFFICIENT!

This shift-connecting and disconnecting threadless coupling guarantees a speedy getaway when falling walls or uncontrolled fire threaten the safety of men and apparatus. Push the handle for a positive, leak-proof connection—Pull it and it disconnects instantly. This National Threadless Coupling eliminates all threading and misthreading—Solves all hard suction problems—Cannot Leak, Freeze or Jam — No wrenches—No Gasket Wear—Sturdy bronze construction—Built to outlast the apparatus—Easily installed on any pumper. Backed by five years of gruelling service. Write for descriptive literature.

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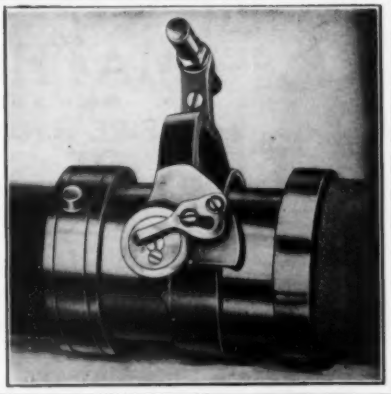
National Standard Threadless Coupling Corp.

Executive Office: 215-217 Beach 122nd Street, Rockaway Park, N. Y.



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300-350 and 500 Gallons Capacity

Light and Heavy Hook and Ladder Trucks.
Miscellaneous Fire Fighting Equipment.
Fire Department Ladders.

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Invincible and Callahan Nozzles

Fire Department Supplies

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

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Complete information upon request.

MAXIM MOTOR COMPANY, Middleboro, Mass.

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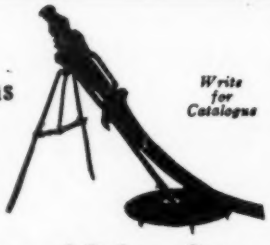
The Woodhouse Manufacturing Co., 156 Chambers St., N. Y.

Eastman Improved Platforms and Holders



Write for Catalogue

are indispensable where high pressure service is required. With Eastman equipment any size streams can be easily handled by one man.

Eastman Nozzles and Deluge Sets

are designed by engineers who for over thirty years have specialized in equipment for producing fire-fighting streams that are unsurpassed for solidarity, distance and effectiveness.

Samuel Eastman Co.,
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6 Patented Features

ERICK SIREN

Thorough Weather Protection

Erick Sirens do not clog up. Snow and ice cannot enter and stop sounding rotor. Completely protected and sheltered from outside influences.

Features That Prove Supremacy

Instant Alarm

Every telephone is a fire alarm station, permitting operator to sound alarm instantly, giving your fire department a chance to get the jump on the fire.

Universal Sound Projector

The Erick Sound Rotor and Deflector is built to instantly send a Fire Alarm.

Our Free Trial offer is made in all sincerity. We welcome your inquiry.

ERICK ELECTRIC SIREN CO.
STATE AND FILLMORE AVE., ST. PAUL, MINN.

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Quality Fire Apparatus

300 to 750 Gal. Triple Combination Pumpers.

City Service Ladder Trucks, Combination and Chemical Cars.

Recent Sales
Harrison, Maine
300 Gallon Pump

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One Tank Combination

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500 Gallon Pump

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OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

OBEDIENCE TO OFFICERS IS IMPORTANT FOR EFFICIENCY

Fire Department Should Have as Much Discipline as Army—Penalty for Disobedience Should Be Severe—Company Is Not a Playhouse

By L. F. GROOVER,
Captain Huntington Beach, Cal., Volunteer Fire Department

FIRES are disastrous. To fight them successfully, to protect life and property and to safeguard the firemen, it is necessary that the members of the department drill constantly.

A fireman is responsible for the public's safety. He must know the various fire signals so as to locate the call instantly. Speed is necessary, but not at the expense of safety. There is only one minute's difference between operating the apparatus one mile at sixty miles an hour and one mile at thirty miles an hour. Speed with safety counts. Try to get to the fire shortly after it has started.

A fire that does $25,000 damage in four hours is burning at the rate of $104 a minute. It is therefore necessary to take drills seriously in order to increase the efficiency in arriving at a fire. Drills may result in the saving of life, and is indicative of better loyalty to the city. The training received at these drills will be invaluable should some gigantic catastrophe such as an earthquake, flood or conflagration visit your community. That is the time when the volunteer firemen will be glad that they received such specialized training.

Obey your chief and carry out his order. Should he be wrong, remember that he is the one that will shoulder the blame and not the fireman who is merely following instructions. The captains are pledged to follow the chief's commands. When the chief says, "Go in," don't stop to argue. The chief believes that it is safe to send men into the building, or he would never give the order. After all, he is responsible for the safety of his men. Either follow out the chief's order or leave the department to make room for some man that will.

A fire department is not a playhouse. It is the nearest duplication of a military organization there is, if the department is conducted in the proper manner. The penalty for disobeying the chief's orders should be just as severe as not following the instruction of a superior officer in the army. Most every one knows what that means.

Take your work seriously. Joking and acting like a group of irresponsible school boys should not be permitted at a fire. The public judges the department by the acts of the individuals, and the public is also quick to criticize. It will not be long before a rumor starts circulating that the department does not function harmoniously. Make the public believe in you and you will not have any trouble in obtaining the necessary appropriations for the operation of the department.

Any complaints about the organization should be made to the captains or the chief. They are the proper officials to hear such matters. Do not tell your troubles to every one that you meet or are friendly with. Should you have a just complaint, you may rest assured that the chief will try to adjust or remedy the trouble. On the other hand, if some fireman is worthy of praise, tell him so publicly. Boost the department. If you are unable honestly to say some good things about the organization or the firemen, then the best thing to do is to be silent. The public detests a grouch or a fault-finder.

Each fireman is duty bound to help the chief. It is a reflex action for by so doing, the man is helping himself. Very little is accomplished by a disgruntled department. Each one then follows his own selfish desires and makes a failure of the chief's regime. Say to yourself:

"We have a good chief and it is up to us to help him, for by so doing we are helping ourselves. He has an interest in each of us and the department as a whole. We must give him the best that is in us."

If every one works in harmony, there can be no question regarding the success of the chief and the department.

Experiences of a Rural Department

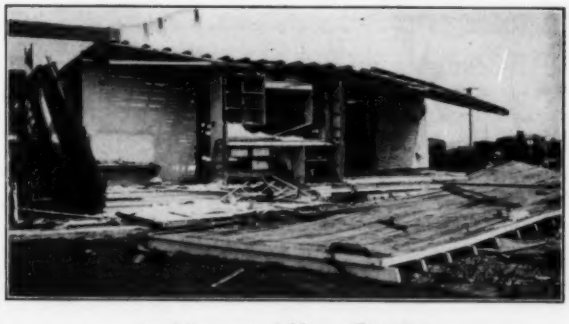
It was only three years ago that Salem, N. Y., depended upon hand drawn fire apparatus for fire protection. The village has a population of only 1,200 persons. Within a radius of six miles, there are a number of small hamlets, in addition to a number of farms.

Brooks, ponds and lakes furnished an adequate water system from which water could be drafted in case of fire.

A movement was started a number of years ago to purchase a pumper by public subscription. The outlying districts were quite skeptical towards the plan. The local department agreed to answer any fire alarm, either day or night, free of charge in return for their assistance in purchasing the pumper. Enough support was secured to purchase a triple combination pumper. Later a larger pumping unit was added.

There are no paid men in the department. When a fire alarm is received the telephone operator starts the mechanism that sounds the alarm on the siren, which by means of prearranged signals, indicates the location of the fire. The average getaway time during the day is about thirty seconds and during the night from two to four minutes. The organization has proved conclusively to the farmers of the section that it is possible to give protection to farms.

Memorial Services Held in Reading, Pa.—Memorial services were held in Reading, Pa., for 102 deceased firemen.



An Unexpected House-Opening

A gas explosion at Home Gardens, near Los Angeles, injured five persons in the house, blew out the wall as if it were cardboard and blew furniture into the yard. The blast which occurred when one of the victims lit a match and ignited accumulated gas, shook houses 1,000 yards away. Parts of the wreckage were hurled several blocks and showered on neighboring roofs. This picture shows how the house looked immediately following the explosion.

FALSE ALARMS

SERVICE A LA (HOSE) CART

Up in Montpelier, Vt., some woman went to the phone and after receiving her connection said in an excited voice:

"Come as quick as you can to 15 Barre street."

They came. A fire company rolled up to the house and saw a man calmly reading the paper in the living room.

"Where's the fire?" the chief asked.

"I don't know," the man said, bewildered. "You must have the wrong number."

It was a wrong number. A woman roomer wanted a taxi to go to the motion picture show and had called the wrong number. The fire chief, being a good sport, offered to take the lady to town, but the invitation was declined.

WHEE!
WHOOPEE
THIS'LL BLOW UP A REGULAR OLD NORTHEASTER WHEN THE REST O THE GANG FIND IT OUT!
BLINKETY BLANK
NORTHEAST VOL. FIRE CO.
THE DURN FOOLS WEREN'T SATISFIED JOY-RIDING ON OUR FIRE TRUCK - THEY SMASHED THE DOOR BESIDES!

—Drawing by "Art" Espey

The Fire Truck for Joy Rides

Officers of a volunteer fire company in Pennsylvania are very much provoked. It is true that the town has some very pretty girls. It is also true that the town has a number of dashing young Romeos. But that is no reason, the officers claim, why some one should break into the fire station and steal the fire apparatus for moonlight rides. Nor was that all. The same gallant took one of the doors off the station.

PLEASING ALL

Politics was an important thing in a little town nestled among the Pennsylvania hills. There were two newspaper in that town, each the mouthpiece for a faction. When the chief of the fire department was forced to resign as a result of charges of inefficiency, one paper very tactfully printed the following item:

"Those who knew Chief John McCue will be interested to learn that he has resigned from the department. He made the department what it is."

OVERCOME BY SHOCK

Fireman Bryan brought action against the Ever Ready Ice Company for damages. While on the way to the fire, the truck crashed into the apparatus with the result that Bryan was thrown on to the sidewalk. He sued the company and won.

A friend asked him, "How did you feel when the court awarded you $15,000 damage for your injuries?"

"Gee, I was so happy that I threw away my crutches."

WELL PLANNED

Robert got married. He was the first one on the day shift to be married since Station 4 was erected. Some of the boys were on hand to hear him say, "I do."

The next day, the boys were in the recreation room discussing the wedding. One of the boys said with a meaning sigh:

"Wise old Bob, getting married on February 29. Only one wedding anniversary present every four years."

SPOILED THE CURE

As soon as Truck 7 rolled back to the station, McCarthy ran up stairs with his left trouser leg rolled up. There was a nasty looking red mark on the bare leg.

"Man alive, Mike, what got you? Somebody catch you with an axe?"

"No. No axe. I had just crawled into an apartment on the second floor when some damn mutt grabbed my leg."

"Tell you what Mike, put some peroxide on it."

"Naw, not this time. The dog got away."

AN USUNG HERO

O'Connors had rescued a woman from a smoky apartment building and the crowd cheered. It was, therefore, natural when his company rolled back to the station and the apparatus had been placed in working condition, for the men to talk of rescues in general.

"I once saved a man's life, and no one ever praised me for it," said one of the newest members of the company, who had been janitor of an apartment prior to entering the fire service.

"How was that?" every one asked.

"Before I joined the department, and while I was working as janitor a drunk came home, fell into the tub and turned on the hot water. He would have been scalded to death, only—only."

"Only what?" asked the other firemen.

"Only it so happened that there was no hot water."

HONORING LINDBERGH

There was one fire company in a California city that had to get its own meals on the day that Col. Lindbergh landed in Paris. The Chinaman who cooked for the boys decided to celebrate, for the very day that Lindbergh landed the cook became the father of a boy.

The next day when the Chinaman came around with the news, the captain said, "I suppose you'll call him Lindbergh."

"No. No good Chinese name. I callee him One Long Hop."

HEATED TESTIMONY

During a trial in Forest City, Ia., the court scribe was busily taking testimony.

Just as one witness was answering a question, the scribe shouted, "Fire." His vest was on fire.

Upon investigating it was found that there were matches and a file in one pocket. Constant friction caused by moving the arm back and forth over the table started the match fire.

TRUE TO TRADE

Kelly was a mechanic in the fire department repair shops. In an accident at the shop, Kelly lost his reason and he was committed to the asylum. Several months later Kelly's friends went up to see him. They were brought into a room, but Kelly was nowhere in sight.

"No one's here. Where's Kelly?"

The attendant smiled:

"He's under the bed working on the springs."

—Drawing by "Art" Espey

One in Every Company

Firemen of Elmira, N. Y., must know their vegetables. Recently Truck No. 2 was called to fight a fire of minor consequences under the hood of an automobile. A fireman was sent to a nearby residence for a handful of flour with which to extinguish the blaze. He grabbed a handy bag of Graham flour from the kitchen cabinet and rushed back. Confidently he started to empty the bag's contents on the fire. There was a rattle like buck shot. Out came beans—plain, shelled white beans.

AIR-LEC

opens and closes fire station doors automatically

—at the touch of a switch!

Operates swinging, folding and sliding doors. By far the fastest selling door operator on the market. Fifth successful year. Describe your doors. Order by mail. We will guarantee to send you the proper AIR-LEC style and size. Installation is a simple job.

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of Every Description

QUALITY GUARANTEED

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Prompt Delivery

Write for latest catalogue and price list

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88 Chambers St., New York

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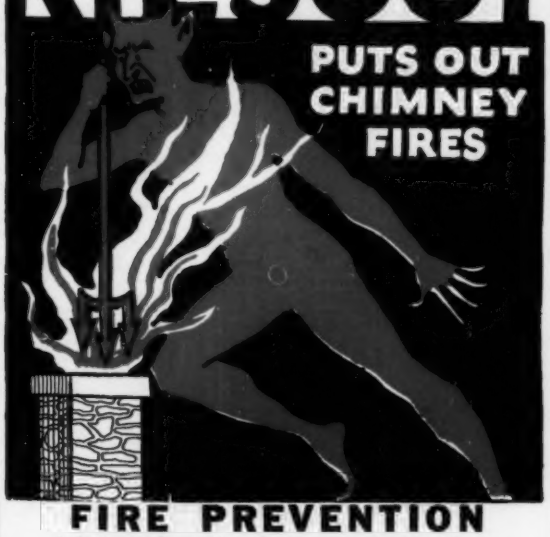

FIRE PREVENTION

A better, safer and surer way to prevent and extinguish chimney fires is offered to fire chiefs and fire prevention bureaus in the use of "Kilsoot."

We repeat our offer to send liberal samples and full details regarding this remarkable chemical product—gladly furnished upon request.

KILSOOT CHEMICAL COMPANY, INC.
1834 Broadway
New York, N. Y.

HALE PUMPS

LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

HALE FIRE PUMP CO.
Conshohocken, Pa.

COREY

Hydrants as manufactured by "Rensselaer" are being used to fight fire in every State of the Union. Made of the very best material and workmanship.

"The Rolls-Royce among Fire Hydrants"

RENSSELAER VALVE CO.,
TROY, N. Y.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

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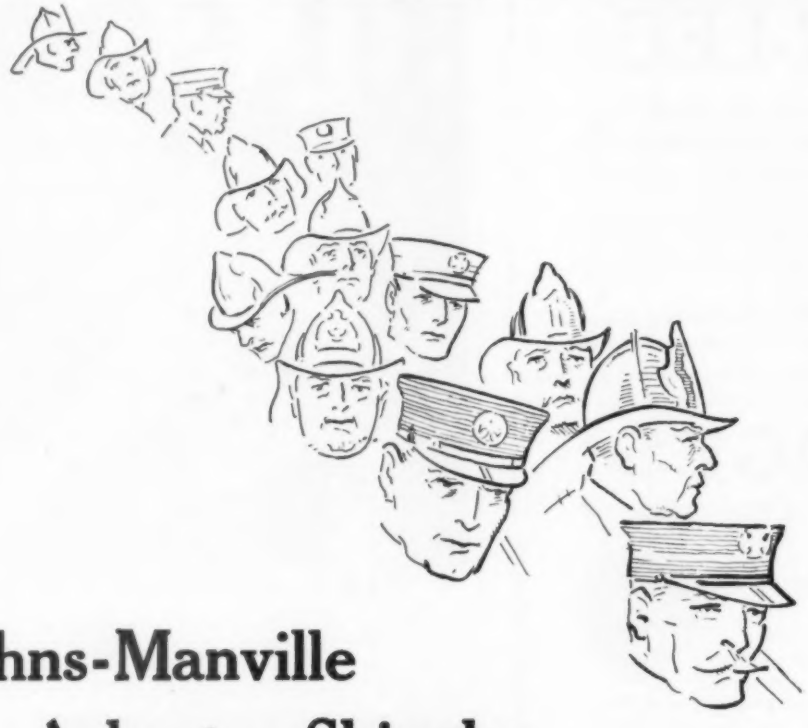
Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

BI-LATERAL FIRE HOSE

THE BI-LATERAL FIRE HOSE CO.
230 West Randolph St., Chicago, Ill.

If you purchase BI-LATERAL FIRE HOSE it will increase the value of your hose-carrying apparatus more than the cost of the load of Bi-Lateral Fire Hose.

We can load from 25% to 33% more and when coupled with rocker lug couplings the Bi-Lateral hose makes an apparatus one to be proud of and as near perfect as possible to do quick and efficient service.



Johns-Manville Asbestos Shingles end the Flying Brand menace

NO roof of Johns-Manville Asbestos Shingles can ever scatter fire over neighboring houses by flying brands. Every roof of Johns-Manville Asbestos is FIRE-PROOF, and will not ignite from embers blown from dangerous, burnable roofs.

Yearly more communities are insisting on the use of fire-proof roofs by all house owners. Johns-Manville Asbestos Shingles meet every demand of fire chiefs.

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NEW YORK — CHICAGO — CLEVELAND — SAN FRANCISCO

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5 Aerial Trucks.
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7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos, Clothing
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal.
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid, Fire Apparatus.
24 Chassis for Fire Apparatus.
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29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment, Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Fire, Soda & Acid.
35 Extinguishers, Fire, Tetrachloride.
36 Extinguishers, Fire, Foam.
37 Extinguishers for Chimney Fires.
38 Fire Boat Nozzle Equipment.
39 Fire Department Supplies, General.
41 Fire Exit Devices, Door Opening.
42 Fire Alarm Posts.
43 Fire Escapes, Portable.
44 Fire Escapes, Rigid.
45 First Aid Equipment.
46 Flare Lights.
47 Flashlights, Hand.
48 Foam Liquid for Extinguishers.
49 Gas Masks and Respirators.
50 Gas & Smoke Helmets.
51 Gasoline & Oil Handling Equipment.
52 Goggles, Firemen's.
53 Helmets, Metal, etc.
54 Hose Carts, Reels & Racks.

Help Wanted?

Whenever you are in the market for new equipment you naturally want to get complete information from all reliable manufacturers before you place the orders for your department.

This page is a feature of every issue to make it convenient for you to get all this information without cost to you and without placing you under any obligation whatever to buy from any particular manufacturer.

You only have to run down the list of equipment and mail in the coupon below with your name and address and the numbers that indicate what you are interested in and we will then have the leading manufacturers of this equipment send you complete information direct—so why not let us help you get what you want? We are glad to be of service. Help yourself.

For Information on Any Equipment Not Listed, Write on This Page or Use Separate Sheet.

55 Hose Clamps.
56 Hose Fire.
57 Hose, Chemical.
58 Hose Holders.
59 Hose Jackets.
60 Hose Standardization Tools.
61 Hydrant Draining Pumps.
62 Hydrants, Fire.
63 Jacks for Fire Trucks.
64 Jacks, Shoring & Prying.
65 Ladders, Fire.
66 Lightning Arresters.
67 Motorcycles, Fire Dept. Equipped.
68 Nets, Life.
69 Nozzles, Pipes & Misc. Brass Goods.
70 Packings, Pumps.
71 Pads, Pole Hole.
72 Paints, Fire Resisting.
73 Primming Ether, Motor.
74 Pumping Cars, Standard.
75 Pumping Cars, Foam.
76 Pumps, Fire Apparatus.
77 Pumps, Fire Service, Stationary.
78 Pumps, Portable, for Fire Protection.
79 Record Books, Fire.
80 Relief Valves.
81 Reviving Apparatus, Oxygen.
82 Rubber Clothing.
83 Searchlights.
84 Shingles, Fire Retardant.
85 Shirts, Firemen's Special.
86 Sirens, Apparatus & Chiefs' Cars.
87 Sliding Poles.
88 Soda & Acid Chemicals.
89 Spark Plugs, Fire Apparatus & Motorcycles.
90 Squad and other Auxiliary Cars.
91 Sprinkler Head Shut-Offs.
92 Sprinkler Supervisory Service.
93 Sprinkler Systems, Automatic, Foam.
94 Sprinkler Systems, Automatic Water.
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96 Steam Fire Engines.
97 Tarpaulins & Fire Blankets.
98 Tetrachloride Chemicals.
99 Thawing Equipment, Hydrant.
100 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid.
101 Tractors.
102 Traffic Clearing Systems.
103 Triple Combination Pumping Cars.
104 Uniforms.
105 Water Towers.
106 Wheels, Cushion.
107 Whistles, Fire Alarm, Compressed Air.
108 Whistles, Fire Alarm, Steam.
109 Whistles, Fire Apparatus.
110 Wrecking Trucks.

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FIRE ENGINEERING

225 West 34th St., New York City.

As a fire protection official I should like to have descriptive literature and complete information mailed to me, without cost or obligation, on the equipment indicated by the following numbers:

Nos.....

Nos.....

Nos.....

Date.....

Name.....

Position.....

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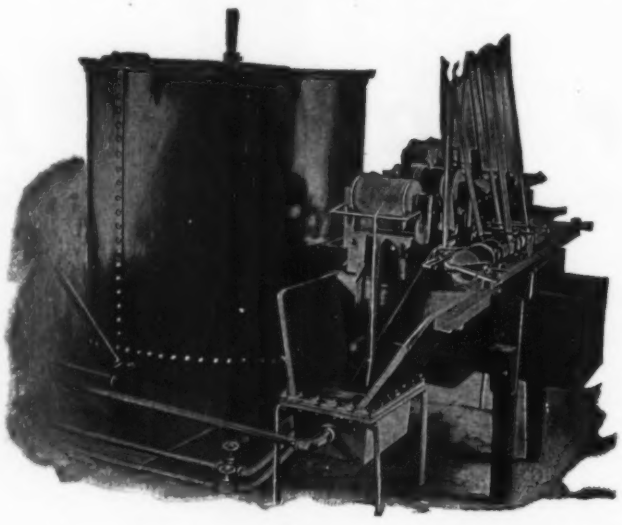
City and State.....

2-22

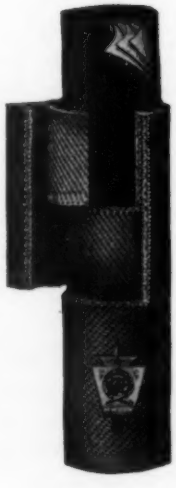


How is it Made?

FABRIC FIRE HOSE is so unusual in its construction that we have been asked again and again just how it is made. Those who have used it and have found its wonderful service qualities, far above the average hose, felt sure that we must have some special process of manufacture that makes Fabric Hose better.

And we have.

For instance, the machine illustrated above is for our patented process of treating the cotton strands with wax and Para gum, making Fabric Hose absolutely waterproof and impervious to mildew and rot.



Many other details of our process, besides this one, are illustrated and explained in a little booklet we shall be glad to mail you for the asking.—"Wax and Para Gum Treated Fire Hose.—How It Is Made." Address:

Fabric Fire Hose Co.

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Here is a convenient subscription blank for the reader who is not a regular subscriber. 26 issues for $3.00. Pay within 90 days.

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Fire Engineering, 225 W. 34th St., N. Y. C.

"'Safety' is one of the most important factors in the operation of our equipment.
"The life and limb of our personnel and the public must be safeguarded, and this calls for one of the most effective wear-resisting non-skids obtainable.
"That your product has delivered this service goes unquestioned when a review of our records shows that we have used Firestone Tires for the past eight years."
Thos. Baird,
Chief, Fire Department,
Fresno, California.

The Mark of Quality

Let the Firestone Dealer

Save You Money and Serve You Better —

Hundreds of Fire Departments throughout the country are taking advantage of the complete tire service that is being provided by Firestone Service Dealers. These dealers know tires, having learned the latest facts about tire construction and care at Firestone Tire Educational Meetings conducted by factory trained men all over the United States. They are experts in tire repairing, many of them having attended the Firestone Repair Schools held at the factory and in many principal cities. This is a big advantage to the Fire Department when dependable tire repairs are needed without delay.

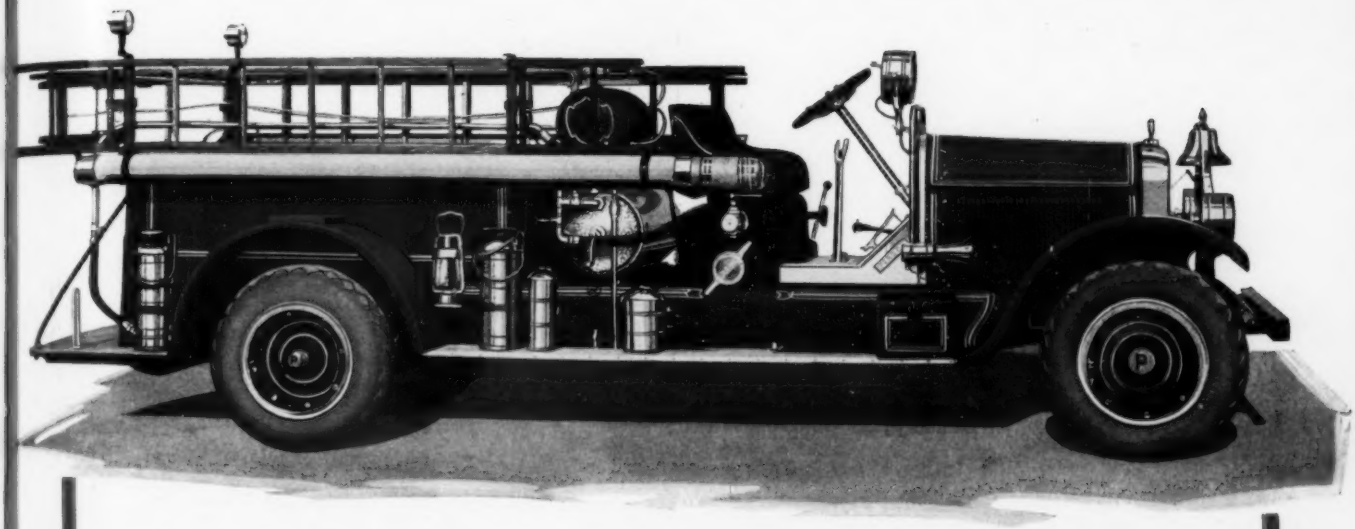
The Firestone Dealer is trained and equipped to provide this new and better kind of tire service. He is able to supply Firestone Gum-Dipped Tires—the tires that are famous everywhere for their safe, non-skid tread and their easy-riding, long-wearing Gum-Dipped carcass. Call on your local Firestone Dealer to explain his service plan, and demonstrate to you why Firestone Tires will serve you better.

MOST MILES PER DOLLAR

Firestone

GUM-DIPPED TIRES

AMERICANS SHOULD PRODUCE THEIR OWN RUBBER .. Harvey S. Firestone



The Modern Fire Engine is a product of Experience

THE modern fire engine must start in an instant; travel at high speed with ease and under perfect control; and pump at full capacity for hours at a time. And—always there is life and property at stake.

This organization has devoted intensive research and study to the operation and performance of fire engines. It has specialized for many years in the design and building of this equipment. Pirsch Automotive Fire Engines are now recognized for their many outstanding qualities.

Unfailing dependability is assured by careful design and accurate workmanship to the minutest detail.

High efficiency with 25% reserve capacity is attained by building every unit more than adequate for its intended load.

Many features of convenience have been originated and developed by this organization which are essential to speedy and effective operation of the unit as a whole.

Full information and specifications covering the Pirsch Standard, Special, Intermediate and Champion fire engines will be mailed on request. Write.

PIRSCH
EST. 1857

FIRE ENGINES *and* EQUIPMENT

High Efficiency and Large reserve Capacity characterize all Pirsch fire engines.
There are four Models. The "Pirsch Champion" 600 gal. Pumper is illustrated above.

PETER PIRSCH & SONS CO.

Factory and Home Office
Kenosha, Wis.

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GOOD Fire Hose is Fire Protection Insurance!

No fire department can be more efficient than the hose in its wagons. Every experienced department man realizes that dependable fire hose is one of his mainstays in the continual battle against fire losses.

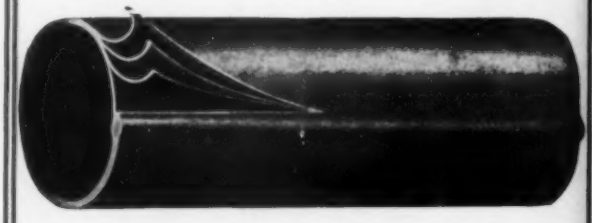
The purchase of fire hose is an investment—not just another expenditure. It means an investment in efficient, dependable fire protection.

Buy GOOD hose! Stop buying hose on a price basis alone. Often if but ten cents a foot were added to the purchase price of the hose that you are buying—you could invest in the finest hose on the market. Just ten cents a foot—and the life of the good hose will be twice to three times that of the cheaper grade.

For over fifty years Paragon and the other famous brands of Eureka manufacture have been recognized as the standards of fire hose quality and service. "Eureka" stays on the job 'til the job is done!

"Standardize on Eureka!"

The secret of Eureka Service lies in the Eureka Construction.



There is no finer rubber lining made than the four-ply, hand-made, lap-joined tubes that form the waterway for all brands of Eureka hose. Another factor of Eureka Fire Hose supremacy. From cover to tube, there is no better hose on the market than the famous brands bearing the Eureka trade mark.

This cross-section of Eureka four-ply, circular multiple woven Fire Hose shows the exclusive smooth interior construction. An extra ply of fine yarn woven in the valleys of the inner surface, levels off that surface of the fabric which comes into contact with the rubber tube—entirely eliminating the ribbing or corrugating of rubber linings, unavoidable with other constructions. This feature adds 25% to cover strength.

EUREKA FIRE HOSE

EUREKA FIRE HOSE MANUFACTURING CO.

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